

Are our all research journals scholarly and peer reviewed?

When I check my e-mail account, I observe that on an average I receive one request in a week to send a paper for a particular journal. It seems that there is a mushrooming of journals. In India it is easy to start a journal – just register the journal with RNI (Registrar of Newspaper/Magazine in India), constitute a dummy editorial board, get the ISSN from National Institute of Science Communication and Information Resources (NISCAIR) and the journal is ready to be launched. In 2009, according to the ISSN register (www.issn.org), there were 7,425 journals registered in India, whereas this number reached 16,161 by December 2013.

After the implementation of Academic Performance Indicator/Performance Based Appraisal System in 2010 by the University Grants Commission (UGC) for evaluation of the performance of faculty for career advancement and/or recruitment, a trend has emerged in the last five years to start an in-house journal in some organizations, or by some associations or NGOs to publish at any cost, simply to meet the scores for promotion/recruitment. In many Indian universities,

for the selection process, the journals are classified into national and international for allotting marks, whereas they should have been clearly classified as ‘Indian’ and ‘foreign’ journals. It has been seen that many a times a journal having the word ‘international’ is taken as foreign and papers published in it get more marks. Therefore, most of the journals started after 2010 have titles ‘International Journal of...’.

A new trend has also begun to collect handling charges from the authors who want to publish their papers/articles in some journals. It seems that authors are able to get anything published that is in type form in these journals without going through the reviewing process. Here no paper is rejected. Such paid journals have become a booming business and this trend has tarnished the standard of research journals in various fields. People with little experience in editing and reviewing become chief editors and referees. There are instances when heads of departments tend to insert their names in most of the papers, or even in the papers communicated from their department for conferences, irrespective of whether they

have contributed to the paper or not, just to enhance their list of publications, which is totally unethical.

Here, the main point is that if somebody publishes his/her paper in *Economic and Political Weekly (EPW)* or *Current Science* and another person publishes in *International Journal of XYZ* published from India, then who will get more points according to the UGC criteria? Should we compare the standard of *EPW* or *Current Science* with any other so-called international journal? Therefore, we should have a strict code for academic and research journals, which should be prepared by ISSN assigning agency, i.e. NISCAIR. It is also necessary that while evaluating the quality of publications, emphasis should be given to those publications which are indexed and cited by international databases like *Scopus*, *Web of Science*, etc.

ANIL SINGH

*Competition Commission of India,
‘B’ Wing, HUDCO VISHALA,
14 Bhikaji Cama Place,
New Delhi 110 066, India
e-mail: dr.anilsingh5@gmail.com*

What constitutes a successful institutionalized education?

Quite often these days we hear people, both young and old, talk about education. This is because there is both an earnest desire to improve the plight of education and know what is real education. An improvement in status of education can come about only when there is a clear understanding of what is education. This note gives an idea of what is institutionalized education and subsequently discusses what constitutes a successful institutionalized education – in the context of a professional degree. Many of the ideas I share here are a collation of my thoughts and of educators whom I know.

Understanding what is institutionalized education, is equivalent to understanding the purpose of such education. Today, the majorly perceived purpose of education at the level of a professional undergraduate degree is to secure a job with good income. There also exists a fraction of people who perceive educa-

tion as a means of equipping oneself with technical skills so that one can effectively contribute to, and keep pace with the technological advancements. The possibility of earning high income with a professional degree is indeed a reality and so is the possibility for an educated person to contribute to technological advancement. However, to claim that job placements and equipment with technical skills are the purposes of education is superficial. They are but by-products of education. Rather, one may argue that the purpose of education is the holistic development of an individual who possesses the general knowledge needed for making informed rational decisions and inferences on familiar and novel situations in personal and intellectual life¹. If such an idea is agreed upon, then one easily sees how such an individual can make a deeper impact on his/her own life, as well as the society. On the prem-

ise that one agrees that making a deeper impact is more important, one may now define that the purpose of *institutionalized* education is to ‘provide an environment where a person undergoes a process that results in enhanced mental capability to function effectively in familiar situations in personal and intellectual life, as well as to adapt to novel situations’².

Now that we have defined the purpose of institutionalized education, the next question is how a successful institutionalized education can be achieved or, in other words, how a nurturing environment is developed and what is the role of the individual stakeholders in achieving the goal of education. While the educational institutions, by way of their academic policies and curriculum design contribute to the development of a nurturing environment, students, teachers and parents contribute to the development and honing of mental capability of

the students. Almost all professional educational institutes offer personality development or HR skills courses that hone the soft skills of the students. Further, the institutes also allow organization of student-led symposia and events which inculcate leadership and team work in the students and provide an opportunity for the students to function effectively. In the context of development of enhanced mental capability, from a student's perspective, the teachers have a major role to play (I think many of the teachers, who were also once students, will agree to having had such a notion). A student, who is at the receiving end, expects a teacher to 'mould' him/her. While it is indeed a legitimate expectation, what we fail to realize as a student is that education is a two-way process. Despite the fact that the student is at the receiving end, unless he/she puts in efforts not just to learn but to cherish a

subject, he/she cannot fully achieve the purpose of education. Cherishing a subject requires thorough knowledge of the basic facts in the subject and thence creatively applying it to various situations without loss of rationality. To hone such higher-order cognitive abilities requires conscious dedication. Thus, a student needs to be proactive. Teachers play a vital role in facilitating this development of higher-order cognitive abilities via the techniques they employ in teaching (e.g. discussion of open-ended questions and coming up with possible strategies, etc.). Parents act as pillars of support for the students. The confidence and support they provide students to overcome the hurdles in the progress of cherishing the subjects is quintessential. Particularly, students face adolescent-related, time management-related, prioritization-related issues. Parents play a vital role in helping the students overcome these issues.

Thus, the clear understanding of the purpose of education by all the stakeholders, awareness of the limitations and difficulties of students, the creative abilities of the teachers and parents to help the students hone their higher-order cognitive abilities and overcome their difficulties, and the academic policies of institutes together constitute a successful institutionalized education.

1. <http://www.iiserpune.ac.in/~mohan/educated/ingred.htm>
2. Adapted from <http://www.iiserpune.ac.in/~mohan/educated/edthi.htm>

VIGNESHWAR RAMAKRISHNAN

*School of Chemical and Biotechnology,
SASTRA University,
Thanjavur 613 402, India
e-mail: vignesh@sabt.sastra.edu*

Attracting undergraduate students to scientific research: limited openings in national laboratories

Ananth¹ has once again drawn the attention of scientific community by highlighting the importance of attracting young undergraduates to the environment of scientific research at an early phase of their science education. He has suggested that every research institute in the country should admit 30 undergraduate students every year. In this seemingly modest suggestion, he has entrusted a huge responsibility on the research institutes in the country – a responsibility that the research institutions and national laboratories in the country have carefully avoided over the decades.

The fact that we need to attract students to pursue a career in science has been well established, particularly as one sees the dwindling admissions for science stream courses in a large number of colleges. A degree in science is not considered to be useful in the Indian job market. In spite of the fact that many young students are attracted by science subjects in high school, they do not see their curiosity and interest being fulfilled in the portals of the undergraduate colleges they enter. They do not get to see their teachers engaged in exciting research and sharing their excitement with

young students who show a great deal of curiosity at that stage of their undergraduate education. They do not get to see the attractive atmosphere of laboratories where people are working at odd hours, handling sophisticated laboratory equipment that could enthral the young minds and challenge their curiosity. They are experiencing science only in their textbooks, on the blackboards of their lecture halls and in the examination papers that they answer at the end of the year. This kind of science does not excite them.

When India decided to enter the field of atomic energy, Homi Bhabha had realized the importance of tapping the potential of undergraduate students to enter this area of science. It was not offered then in traditional universities. He therefore embarked on starting a Training School like the Bhabha Atomic Research Centre, full of working scientists and engineers, who took the responsibility of teaching the young students, while pursuing their own research. The training school students were, in a sense, 'immersed' in the culture where they could not only see their own curiosity satisfied, but at the same time could see the careers

they could pursue once their training was completed. Unfortunately our large numbers of colleges, offering science degree courses, do not excite the scientific minds, which we lose out at an early stage in the life of a potential working scientist of the future.

For a long period after independence in 1947, the Indian higher education system continued to be isolated from the culture of scientific research. The national laboratories were set up exclusively for carrying out research, with no responsibility for teaching, especially undergraduate students, who could be the fountain head for the future pool of scientists. Undergraduate teaching and research continued to be isolated from each other.

It is precisely this concern that had triggered the movement started by late V. G. Bhide, then Vice Chancellor of Pune University and Govind Swarup, the world renowned radio astronomer from the Tata Institute of Fundamental Research (note the workplace of each), who started the movement of integrating science education and research in India. The result of this unique movement is what we see now with the initiation of several