CORRESPONDENCE

The need for NET exams

This is in response to a letter from Nilavu suggesting that CSIR/UGC (NET) examinations suppress research enthusiasts. The person appears to be wrongly informed on certain matters. NET exams were designed and implemented to provide a yardstick for selection of faculty to teach undergraduate and post-graduate courses. Secondly, a person passing NET (JRF) examination is provided with a fellowship to pursue his research. Not all institutions accept a NET (JRF) passed candidate for their Ph D programmes and many of the national institutes have their own entrance criteria for entry into their Ph D programs. A person who fails to qualify NET (JRF) is in no way inferior and he/she can certainly pursue research in several institutions and universities. Such candidates may be provided research fellowships through funds granted to the principal investigator of a project and carry out research leading to a Ph D. Nothing prevents them from pursuing their interests otherwise also with their own sources of funds. Many youngsters who have not qualified in the NET exams have done well in science.

NET has been prescribed as a requirement for teaching posts in universities and we need to have an assessment for entry into teaching posts. University teaching posts are open to competition at the national level. Under these circumstances, we need to have a common test like NET to assess the suitability of candidates. It would be prudent if the UGC also insists on NET, instead of accepting SLET as an alternate qualification. When an exam such as NET exists, why accept another test conducted as the state level by a different agency which duplicates the process for the same purpose? Since many universities now offer distance education programmes, candidates undergo drastically different training compared to traditional on-campus courses, in many science subjects, but ultimately end up getting the same postgraduate degree. In a situation like this, we need to have a mechanism of quality control, which is in the form of NET exams. The quality of Ph D in many institutions leaves much to be desired. In view of this, the Chancellor of universities in Karnataka has directed the universities to change the regulations of doctoral studies and has made them more stringent. NET exam ensures a test of certain academic qualities required in a person to be on the faculty and draw UGC scales. The test does not prevent a research enthusiast from taking up science as a career.


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Reconsidering ourselves: Assessing oneself and the present educational scenario

Lakhotia’s article excited our impulses generated during the days of our M Sc, when we deeply felt that a visit to universities abroad for doctoral or postdoctoral research was ‘disagreeable and awful’. In the present context, it is a matter of great concern for the student community of this country involved in scientific research, as to what precisely do we gain after obtaining a research degree abroad. Most of the ambitious, talented and committed students leave this country at a time when they can contribute the maximum. Finally, the outcome is a humiliating self-defeat for the country that feeds us and nurtures our knowledge, but unfortunately remains a silent spectator to watch others reap the harvest. Another equally pertinent issue is the importance of work done during Ph D or postdoctoral research in a foreign country whereby a topic, relevant to that country, might not be an important one for a country like India. India demands innovation and invention of new technologies for its rapid economic development. We need people who can identify and address the lacunae hindering the country’s economic growth. To understand our motherland better, we need to recognize ourselves, our intermingled cultures, societal set-up and the environment we live in. India has a vast pool of natural resources, including forests, flora, fauna, fuel, mines and ores. Large parts of this great land are yet to be explored. On the other hand, there is ample scope to study its people, geology, geography, climate or the atmosphere. We need more efficient manpower who can harness our resources and address problems related to food security, water conservation, flood and drought, genetic diversity, landslide and earthquake management, town and city planning, conservation of viable ecosystems, sustainable agriculture, eradication of pests and diseases affecting crops and cattle, improving public health, population and family planning measures, understanding and treatment of tropical diseases as well as mitigating environmental pollution and the like. Research on similar topics conducted abroad might not necessarily reflect similar explanations to problems for a country like India due to several reasons, including climatic, edaphic and socio-economic factors which are indeed different and distinct from any European or American country. With enormous development in infrastructure facilities in recent years, it is pertinent that research conducted for longer periods will capitulate productive and beneficial solutions for our country as a whole. Quality research and extensive findings demand time, space and experience, which are only possible for those with commitment. Besides, we cannot deny our obligations towards our society. Unfortunately, we, the generation-X researchers are instantaneously stimulated towards lucrative career prospects and
promises offered by foreign universities/institutes on one hand, which are totally overlooked by our politicians, intellectuals as well as decision makers on the other. What can a student do when he is not assured of brighter prospects after his PhD or a post-doctoral stint abroad when he is back in this country? This leads to a feeling of insecurity, anxiety or uncertainty about the future, which finally renders the career prospects of bright enthusiastic students in jeopardy. The educational system in India has tremendously discouraged and miserably failed to understand, realize or appreciate the problems, sentiments and visions of young researchers, as a result of which most of us are inclined to move abroad despite the desire to work for our people. We firmly believe that the present educational system needs restructuring, with an optimistic approach to motivate the most learned community of this country to work and contribute to the Indian society in a holistic and integrated manner. In this respect we highly appreciate the objectives stated by Lakhota1, whereby he has clearly pointed out the loopholes responsible for dilapidation of the educational system in the country. We conclude by quoting Lakhota’s comments: ‘We have already paid a heavy price for inaction. Let us not permit ourselves to be put over the precipice from where we can never rise again’. Indeed who else better than Lakhota can realize the circumstances, for he has contributed so much to the excellence of teaching and research in the country.


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Assessment of biodiversity loss

In one of their outstanding decisions in 2004, the 188 Parties to the Convention on Biological Diversity (CBD) approved eight indicators for immediate testing in order to reduce the rate of biodiversity loss significantly by 2010. Two of these measure threats to biodiversity (nitrogen deposition and water quality), two measure responses (protected area coverage and international funding for conservation) and one measures cultural context (language diversity). The other three indicators to assess the progress towards 2010 target are habitat indices, population indices, and the marine tropic index1.

Apart from above-mentioned factors, there are many more important indicators including climate change reported to be responsible for change in biodiversity2,3, yet they have not been taken into account by the CBD. A study published in Science pointed out that from 1982 to 1999 global changes in climate have eased several critical climatic constraints to plant growth, such that the net primary production (NPP) increases by 6% globally, and the ecosystems in all tropical regions accounted for 80% increase in the NPP. This increase is due to increase in air temperature, cloudiness, changing monsoon dynamics, increasing incident of solar radiation and other climatic constraints3.

Since there is scarcity of multidisciplinary approaches in assessing the natural and human-induced effects on biodiversity, the satellite-based estimates of the NPP by Nemani et al.4 have overlooked effects of biodiversity conservation and protected areas network over past three decades. At present, the global network of protected areas covers 11.5% of the earth’s land surface, which surpasses the 10% target proposed a decade earlier5. Obviously such a large coverage of protected areas would have been helpful in safeguarding the various types of natural forests, which were over-exploited earlier and now would be responsible for increasing NPP. Besides, the advent of green revolution and plantations of various tree species over the past three decades in world’s terrestrial ecosystem, of course, would have increased the NPP. Nemani et al.’s5 study was carried out after about a decade of protected areas network’s introduction, which logically also indicates the effects of protected areas networks and other conservation policies such as plantations.

The concluding remark of Nemani et al.4 that the climatic constraints or increase in CO2 are responsible for increase in NPP across the global terrestrial ecosystems without assessing the other causal factors including effects of several years of forest protection seems to be premature. On the other hand, another study on the tropical forests concludes that in warm years the trees are growing more slowly and more are dying6, which may lead to the low NPP. Hence, in the march towards achieving the target of 2010, a multidisciplinary approach with focused aim would have been more effective as evident by the glimpses of past research carried out in isolation with a single discipline.


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