

dendrocytes also aggregates into large particles that are transported along microtubules in anterograde direction<sup>14</sup>. It is very likely that many more such examples will be known soon and a class of proteins will be identified that recognize the 'RNA zipcodes' and accordingly transport the RNA with the help of cytoskeletal components and deliver them at the specified destination. While microtubules may be principally involved in the transport, the actin filaments may have a greater role in anchoring the localized transcripts. Also, as in the case of *osk* and *bcd* transcript localizations during different stages of oogenesis, different subsets of cytoskeletal components may be involved in transport as well as anchorage of the same RNA in a stage-dependent manner. With the feasibility of doing sophisticated biochemistry and molecular probing *in situ* in the cell at

light as well as electron microscopic levels, it should be possible in the near future to have full graphic details of the movement of specific transcripts in cells to their destination and their anchorage after delivery.

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## OPINION

### Declining phase of quality research in our universities

Samir Bhattacharya

A ripple is taking the shape of a vigorous wave, we have ignored it for long and allowed it to grow, and were not careful enough about the power of its irreparable damage. I am talking about the declining phase of our university research environment. Everyone in the academic domain knows in what way the job of a university teacher differs from a college teacher. Teaching and research is obligatory to the university teacher while the latter is not so for a college teacher. To sustain and strengthen the academic environment in higher education, research activity is a must, as feedback from research will keep the standard of teaching high and the creativity of a teacher will encourage the students of higher education to develop their finer qualities. Although these are known, what we are witnessing in our country is the fast receding of such a notion in university education. Doubtlessly, it is the university to be blamed for this deterioration; more precisely, it is the university teachers. Everyone is pointing to the degeneration of research quality in our universities,

but there is no serious effort as yet to recuperate the university from this situation. We have not so far been conscious enough about the fact that such a trend of low-quality research activity would destroy our university system, which is the primary productive centre of higher education. Masters degree is the essential passport for research career in any institution of this country:

Let us first see what could be the possible reasons for this situation. The present policy of merit promotion in the universities is a major factor, where quality is not the regulatory factor. A university teacher has to wait for a specific time period and her/his potentiality is then judged by the number of papers published and the number of Ph.D's produced. Except for a few universities, in most of the universities the number of publications is one of the major criteria, not the quality of publications. This has resulted in the mushroom growth of private journals (published by a person), where peer review system does not operate and money is the prime objective.

If one pays the publication charges, a paper will be immediately published. Such an easy way of increasing the number of publications and then claiming the promotion has two pronged injurious effects on the academic environment; (i) it substantially reduces the desire for quality research among the teachers and (ii) it dampens the spirit of a young incumbent in the university. One may presume it to be impossible as members of selection committee should definitely scrutinize the quality of publications. Unfortunately, this usually does not happen in the majority of universities even if the post is an open post. The system of selection sometimes includes allocation of marks for the number of publications and not for the quality of publication. A person who may have two high-quality publications in well-reputed international journals may not be selected against a person who has ten publications in un-refereed low-quality journals. Another harmful trend is the yield to local pressure by the university authorities where the presence of political milieu worsens the



situation. In such an atmosphere it is difficult to select a genuinely strong academic person with good research background, consequently, many a time the best person desiring to start a career in the university suffers from frustration. The cumulative result of all these is leading the universities towards a bad to worse situation. However, after entering the university as a lecturer or an assistant professor, a person finds that for promotion quality is not the criterion, quantity is the major thrust and therefore her/his attempt is to produce more papers in unrefereed, below-the standard journals and low-grade Ph D's. She or he will probably get more persons in support from the faculty than a person with the will of producing quality research. Thus, when more faculty members are on the other side, a real potential creative researcher does not find a congenial environment and of the two options, i.e. submitting to the other side or facing the odd environment throughout life, the former appears to be easier.

The total aspect has a snowball effect, the research students trained by these teachers will never look for quality research, they will rather waive the possibility of good research to dominate the situation. Recruitment is naturally being influenced by this faculty structure and by all chance one of the low-grade Ph D's will get the opportunity and such a person is expected to repeat the bad trend and this will go on. This is exactly what is happening today.

Another crucial drawback of the universities to create research environment is their poor infrastructural facilities. Universities are suffering from acute financial crisis. A major portion of their sanctioned money goes to salaries and wages, the remaining thin portion is not even enough to provide a reasonable infrastructure for teaching. Research assistance, therefore, is being kept at abeyance. At least a few university teachers who really want to do good research are not getting any support from the university. To them one of the criteria for the job appears to be meaningless: how can one pursue research in this age in such a poor infrastructural condition. Although they might have great potentialities, they are unable to fight this odd environment and ultimately submit to low-quality research to keep their promotion avenue open. In this way universities are losing capable and strong

research workers, which is also a great loss to the country. One can argue that a person may develop infrastructural facilities through research projects from different national agencies. At the beginning of research career or without individual research contributions in a specific line, a grant to develop research facilities is rather difficult. The situation in the IITs and agricultural universities is somewhat different. One of my colleagues curtly replied to my above criticism by mentioning that after spending a huge grant on national laboratories, what is our return today. I have simply pointed out to him that one cannot improve his position by simply pointing out the fault of others.

However, what could be the steps to salvage universities from this degenerative stage. Everyone will feel the immediate necessity of such steps, not only to save our universities from the peril, but also to save the future of our nation. I have a few suggestions:

- (1) It may be recalled that in the recent past the practice of the University Grants Commission to sanction university departmental posts and necessary financial assistance was to evaluate the academic progress (which included both teaching and research curricula) of the department by means of a visiting committee, followed by the recommendation of this committee. This practice has been stopped for long. It is high time to invoke this practice again as evaluation of academic performance will compel the departments to improve their quality. This will provide an incentive to research since the committee may recommend open posts on certain subjects as per the performance.
- (2) In the open posts, weightage should be given to the capability of a person instead of time-bound experience.
- (3) There should be a ban on giving credit for publication in unrefereed journals.
- (4) Assessment of the number of Ph D's produced by a teacher should be based on the publications from a particular thesis in refereed journals.
- (5) The scope of Ph D registration by a part-time student (without any research fellowship) should be very limited as this category is now a major source in increasing the number of Ph D's of a university teacher. Part time Ph D registered students are usually not very much inclined to do quality research, their objec-

tive being just to get a degree, and university teachers, on the other hand, get an easy community to increase the number of Ph D's produced by them.

(6) Both for recruitment and promotion, citation index of publications should be given prime importance; this will enable recruitment and promotion of the best person among the applicants. Moreover, it will waive the present trend of publication in unrefereed journals; these journals are not indexed.

(7) Steps should be taken to provide infrastructural facilities for research activities.

(8) There should be an effective interaction between the university teachers and the research scientists of the national laboratories funded by CSIR, DST, DBT, ICMR, ICAR, etc. This will be mutually beneficial for university teachers and research scientists of national laboratories so far as the creativity part of research is concerned. Moreover, university teachers will be able to utilize the research facilities of national laboratories and scientists from those institutes may also take part in teaching as this will not only benefit the students but also provide the opportunity to the scientists to have exchange with bright students of the universities. Such an interaction is not difficult in the metropolitan cities, while building of national laboratories nearer to the non-metropolitan university premises may cause enormous gain to both research and teaching.

There may be other suggestions, the supreme duty for all of us being not to stand as passive onlookers to the deterioration of research activity in our universities. It is already affecting the teaching adversely and will soon take the shape of an incurable chronic disease which will destroy the future of our higher-education system, the worst sufferers being our future young generations. A day will come when a Master's degree holder in science will speak in a different language which will not be communicable to the advanced arena of science, and higher degree from the university will completely lose its credibility. Still there is time and hope, and steps to resuscitate the universities should be initiated immediately.

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