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Debating Higher Education: Areas of silence and new university models

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Debating Higher Education: Areas of silence and new university models*

Dhruba J. Saikia and Rowena Robinson

The first three sections of this paper will deal with three critical issues, which are usually overlooked in the raging debate about higher education in India. The concern and disappointment is that no Indian university figures in the top 200 of the world. In these debates focus turns mainly to research, and why there is not sufficient good quality work done in the country. The effect of 'brain drain' is also a major worry. In this paper, we will discuss three issues that we feel are crucial to the improvement of higher education standards in the country and to the standardization of norms with regard to how to assess quality in these areas. It is our argument that the issues highlighted here remain unnoticed despite so much attention apparently being paid to higher education today. The final section of the paper discusses the new moves to improve higher education standards in the country by converting premier and prestigious colleges into universities. There are different models to go by and the section dwells on two separate examples and their implications and outcomes.

I. Classroom teaching

The first of the three issues is: Can the teacher teach? The second is evaluation. The third is the research *process*. It may appear at first sight that these themes have been discussed at length in current debates. Certainly, the UGC API regulations include the following items, which

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are now required to be measured: number of classroom hours including lectures, tutorials, practical sessions, seminars and even interactions with students outside the classroom ; preparation of innovative courses and use of innovative methods as well as multi- or bilingual teaching; preparation of new teaching material including translation, bridge material or study material ; and, finally, the use of anonymous student feedback on the quality of teaching. Although there are many drawbacks with API regulations, and some such as outside classroom student interactions are difficult to objectively evaluate, these represent an attempt to improve the quality of higher education.

At the same time the issue we wish to raise is—what actually happens in the classroom? This is *not* something openly talked about even when the quality of teaching and how it should be measured are discussed. Our own experience and observation is that teachers in higher education closely guard their classroom activities and are opposed to any monitoring of classroom teaching, which they regard as intrusive surveillance. Students are passing out of thousands of colleges and universities, in disciplines ranging from Physics and Botany to Economics and History, without any effective feedback on the quality of classroom teaching. Many of these students are barely competent in the subjects they have apparently studied. Having been on different admission committees for many years, we have noted that when assessed for their competence to pursue postgraduate studies or research-based programmes, students are usually found to have poor reading and writing skills, to be insufficiently familiar with the foundational theories of their disciplines, and consequently unable to apply them. Far from being able to think originally, query conventional knowledge or utilize their learning, they do not seem to have even grasped the basics of their disciplines. This leads to poorly trained human resources for higher levels of employment and research at the frontiers of different disciplines, where development of technical and reasoning skills are critical.

To improve this very worrying situation, we need to implement inquiry-based learning across disciplines, which engages students, making the teaching–learning process far more effective and student-centric than at present. Programmes on inquiry-based science

education have had a positive effect in a number of countries across the world. Mere learning by rote of notes either handed out or dictated by teachers does not lead to either an understanding of the subject or development of reasoning skills. Syllabuses are crammed and leave little space for discussion and debate. Although many institutions have tutorials and practicals built into the syllabus structure, the time set apart for these important creativity and skill-developing components is rarely used effectively. Despite the large size of our classes and limited human resources, there is space to be innovative and develop tutorial models in tune with our situation. Effective teacher-training modules will need to be developed; the current refresher courses of the UGC are completely inadequate.

Having overseen syllabi-forming exercises in different universities, we have noticed how teachers involved routinely reproduce the course outlines of other universities. Not only are the syllabi of even many reasonably well-known universities rarely updated but the procedures to do so are extraordinarily torturous and slow. Thus, old syllabi with references missing or incomplete, with errors in spellings and often gross omissions circulate from college to college and big universities to littler ones. Even when syllabi committees are formed and experts invited, the latter usually just tweak existing course outlines a little this way or that. Quite often, an expert will work to insert his or her book or article/s into the syllabus, even when competing or better texts are available. Freely available good online materials even now rarely form part of the syllabi.

UGC API regulations are concerned with the assessment of individual teachers primarily from the point of view of recruitment or promotion. International companies and networks that rank universities mostly focus on research and institutional facilities, though they may also measure teacher–student ratios and the number of international teachers in an institution. The National Assessment and Accreditation Council (NAAC) is best placed to enable the process of assessing the teaching not just of individuals but of institutions and to make institutions accountable for teaching. NAAC has some criteria by which it assesses teaching. These include the evaluation of curricula in order to ensure alignment with institutional objectives, development through consultation

with experts, relevance to local, national and global needs and employability. There is also attention paid to student outcomes but the ways to measure these remain inadequate: the focus is on *awareness* of the importance of outcomes, examination results, *documentation* of the use of technology in teaching and *existence* (though not results) of anonymous student feedback. While these are significant, they still leave a gap and raise several unanswered questions.

We are not making a case for invasive procedures that could endanger academic flexibility or unduly constrain instructor freedom. However, academic freedoms may also be thoroughly abused. What the evaluation procedures of NAAC or the UGC do not show us are the many-layered ways in which processes can be undermined even though it appears that standards are being met. In large part, this is because *self-assessment* is relied upon a great deal. A visit by a NAAC, UGC and/or AICTE team is a major event for an academic institution and a show is put on. There is no effective mechanism of getting accurate information on day-to-day activities critical for understanding how the teaching–learning process is proceeding. Perhaps these agencies could identify well-known scrupulous academics to make surprise checks and report back directly.

Moving further, studies have shown how students' feedback can be influenced by gender, caste, ethnicity or other criteria. Yet even if subjective, student feedback is good. However, one needs to ask if the feedback is compulsory; also, is it taken before the examinations and examination results or after? Even if it is anonymous, what does this mean? Is the feedback taken by the teacher ? Are the questions framed by the institute/university or by the teacher? Is the teacher present during the process of taking the feedback? Does the teacher have access to the feedback forms at any point prior to the feedback outcomes being declared? Are the outcomes of student feedback available (a) only to administrators and the teacher concerned; (b) to students and peers; (c) to anyone in the university or institute; or (d) perhaps even to the accreditation and funding agencies?

Most of us must remember the days when review experts would come to our schools. They would come to the classrooms and ask

students some standard questions on the subjects being taught. When one of us was a member of an ICSSR committee, Professor TCA Anant and some of us had proposed a way to measure the gains of classroom education through an objective assessment of student outcomes. This was to be a process which could be applied in larger contexts, ideally becoming in course of time a means to get a handle on educational standards in any discipline for a state, or region, or perhaps the country as a whole. It would result in pulling up levels of attainment everywhere and help assess teaching capabilities in universities and institutions, resulting in making them more accountable. It would provide a measure of standardization to help gauge what is being taught in different colleges and universities and the degree of competence of students emerging from these diverse institutions. It would also facilitate credit transfer across institutions.

What was the way proposed?

Developing on the mechanisms familiar from our days at school, the proposal was to frame a set of questions in each discipline that students at a particular level should be able to grasp and answer. Thus, a BA Sociology student should be able to explain among other things Durkheim's notion of social solidarity, Marx's theory of class or Srinivas's and Ambedkar's understandings of caste. MSc students in physics should be able to explain basic concepts of thermo and electro dynamics, mechanics, nuclear and statistical physics, for instance. One could have a model of around 20 questions, of which the student may be expected to know perhaps at least 15. This was the basic idea; certainly, alongside this selected empirical studies of teachers could be conducted.

NAAC does not examine how lecturers in many universities and colleges across the country teach the same course or even section of a course for decades. They continue to work from the same set of notes prepared by them in the past. Students end up learning from model answer books that are often written by one of the teachers, and which they may be encouraged to purchase. We argue that in order to improve the level of education across the country and to facilitate the attainment of minimum standards a certain degree of regulation is essential. Without intruding on the classroom, it is still possible to

evaluate teaching through means that are objective and superior to the self-study assessments that lie at the basis of NAAC's procedures. When one is talking about undergraduate and postgraduate teaching, can we not expect that someone who has got a research degree in the discipline should be able to handle any course that is allotted? A teacher must be able to teach different courses at the undergraduate and postgraduate level, as this is not research supervision that calls for a greater degree of specialization.

In the Delhi University Department of Sociology, teachers changed the courses they taught every couple of years. In fact, this diversity and range was enthusiastically embraced. Teachers took pride in it and saw in it an opportunity to read up on a different syllabus and gain new insights in the process. One of the teachers, an expert in industrial sociology, taught a course in the sociology of education, mainly because a few students were keen on that particular elective paper. Again, in the IUCAA-NCRA (Inter-University Centre for Astronomy and Astrophysics-National Centre for Radio Astrophysics) graduate school, no teacher normally teaches a course for more than three years. Such measures help to enhance the available academic expertise in a department, and thereby contribute to its academic vibrancy. Further, a student could be assigned for tutorials to a faculty member other than the one teaching the course or to a post-doctoral fellow, thus enriching learning. In the IUCAA-NCRA graduate school students take up projects with guides from either institute, fostering inter-institute collaboration as well as diversifying and enhancing the student's experience. UGC, AICTE, NAAC and now RUSA could put structures in place for inter-departmental and inter-institutional collaboration in teaching processes and consider these aspects in the overall evaluation of an academic institution.

There are other related aspects that are glossed over. The number of days that classes *actually* take place is important for the teaching–learning process. When strikes, bandhs, random holidays or class cancellations are routinely declared it is not a minor matter. Again, do teachers come on time for classes and is the whole teaching hour actually utilized? Finally, when teachers go for conferences/seminars is there a regular procedure for making up the classes missed, and is this monitored?

Again, missing in debates is the place of teaching abilities in recruitment. Our experience on various selection committees shows that very few universities discuss seriously the issue of teaching when they interview candidates for positions. This may be in part simply erased from sight because we speak of 'Lecturers' or 'Professors' of various grades but rarely at all of *teachers* in the university. Hardly ever, and usually only in the newer universities or IITs for instance, are candidates asked to make a presentation to check their capacity to coherently explain to students. When presentations are made, the emphasis is on the research work of the candidate, not teaching ability. It is rare for a candidate to be asked to 'take a class', i.e., demonstrate teaching skills, and this usually happens before a small selection committee rather than in an actual classroom. Indian universities have paid dearly for this tendency to read off teaching skills from candidates' research outcomes. The universities are inundated by applications and it is difficult to get selection committees to sit together for more than a day or two. Yet, given that a candidate is selected, and becomes part of the system in a career spanning some 35 years or so, the future of the university is crucially dependent on the choices it makes in such selections. Can we then afford to *not* invest more time and effort in getting the right persons for the job?

2. Evaluation

Let us turn now to the second of the 'imponderables' in higher education in our colleges and universities: the largely invisible issue of evaluation. There is of course the evaluation of teachers by students and this was dealt with in the earlier section. Here we are concerned with: Do teachers know how to evaluate students? It may seem nonsensical to raise this question; obviously teachers must know this. However, there are several inter-related skills and competencies required, and there are also systems of monitoring needed at all levels, from setting question papers or devising assignments to marking and grading. Teachers require orientation and training, which are rarely if ever available in any of our universities. Just as with teaching, our higher educational institutions seem to take it for granted that faculty 'just know' how to evaluate. This is not the case, and we will identify many of the pitfalls and gaps perceived in evaluation processes in colleges and universities across the country. Evaluation of a thesis is

not considered here and will be discussed in the last section on research processes.

Earlier, universities tended to follow the practice of a single externally-controlled and managed annual examination to test the students; this had enormous problems including increasing stress on both students and examiners, devaluing the kinds of skills and work that cannot be easily measured in examinations and so on. Now-a-days, with the introduction of the semester system in many universities, most institutions have components of 'during-the-semester' evaluation (which can take any of several forms such as a test, a project, a seminar, practicals or home assignments) and a final examination, with the former being decentralized down to the level of the faculty concerned and the latter, except in a few cases, remaining largely centrally administered. The assessment component that is kept outside of the final examination could be around 20–25% as it is in many cases, or as much as 40–50% as it is in an as yet smaller number of institutions.

This is a huge shift for the bureaucratically-organized and slow-moving Indian universities. It is, overall, a good thing that now there is some amount of decentralization in assessing students, especially since those who teach them are well-placed to know their capabilities and, furthermore, the task of evaluation is spread across the semester rather than compressed towards the end. However, internal or decentralized assessment has become the new 'black box' of evaluation in higher education in India. While the earlier system took all control out of teachers' hands, now it places enormous trust in the teacher with few, if any, mechanisms for monitoring possible errors of judgment or, worse, abuse.

When the changes were instituted, there was no methodical training given to teachers in most universities regarding how to operationalize the decentralized assessment system. It was perhaps assumed that the arrangement would overlay easily onto the already existing tutorial systems and enhance these by making them part of the recognized evaluation of student outcomes. But, in how many universities or colleges were serious or well-managed tutorial systems set up in the first place? Further, examinations can test only certain kinds of competencies including memory, coherence, analytical skills and so on. The emphasis

is on remembering, writing and working under pressure and with speed, for the time-frame is fixed. On the other hand, decentralized mechanisms of evaluation have the capacity to test both these as well as a range of several other abilities such as practical and organizational skills, verbal proficiency, aptitudes for fieldwork, project management, team-work, in-depth research capabilities and so on. How many teachers understand or try to work out ways in order to assess these different qualities?

Grading for activities such as fieldwork or a project, which may constitute a major part of a course, needs to be objective and fair and also done in a transparent manner. The components which are important are the quality of the work done, a report based on the student's work and presentation of the results in an open seminar, which all enable the students to develop different skills. These components could be assigned weightages of say 40, 30 and 30% respectively in the overall evaluation. To bring in more objectivity in evaluation, increased awareness amongst faculty of the different projects in an institution and a culture of students being able to present their results to a wider community must be encouraged. The evaluation committees could be the guide or teacher, a faculty member from the same discipline and another from outside the department, but perhaps from a related discipline. This would also lead to greater participation and interest of a wider section of the faculty in the activities of the students. Our funding and accreditation agencies could make such norms mandatory.

A serious problem with home assignments, project or seminar reports in the day of the internet is plagiarism amongst students. This needs to be addressed on two fronts: (i) development of structures and cultures in educational institutions where students might take a pledge of honour to desist from such unethical practices and prevent rather than condone them in others; and (ii) procuring and installing appropriate software to check plagiarism. UGC, RUSA and other agencies must set apart funds to make these available to our institutions of higher education.

Again, even when it comes to the normal methods of tests and examinations several issues need to be addressed. While universities

typically have some systems in place to try and ensure that final examination question papers are set to a minimal standard, the kinds of issues they are liable to look at include (i) non-repetition of questions from the previous year; (ii) level of ease or difficulty of questions and (iii) the extent to which questions cover the syllabus. The systems should also ensure rigorously that there is a 'difficulty' gradient to questions, that questions assessing different types of abilities—descriptive, explanatory, analytical, imaginative—of students are included. However, universities often have neither guidelines nor any effective institutional frameworks in place to check the quantity or quality of *internal* or during-the-semester tests, even if some have mechanisms for moderating the results. With an increased emphasis on continuous evaluation to help ensure that learning is a steady process, it is vital that question papers internal tests are also set to high standards. This may not always be the case. A degree of monitoring to ensure quality without being unduly intrusive, the building of a departmental archive of question papers which would also prevent frequent repetition, a peer-review or moderation process to ensure quality and procedures to encourage innovative questions are all essential.

In the end, the student is either given a mark or a grade. For him/her, the most serious drawback is lack of feedback on what a good answer should be. Providing a set of model answers to the questions or discussing/solving these in class by the teacher is relatively uncommon in our universities. The whole evaluation process remains obscure to large sections of our students. This does not improve with the introduction of grades. It is essential that the process is transparent with answer sheets being available to students without having to apply separately for these or take recourse to RTI provisions. In the IITs or in foreign universities almost all evaluation is left to individual teachers but there is a very important instrument that helps regulate the system: all grading and evaluation are transparent and open to students. Thus, what was expected in the answers and how particular students may have fallen short must be understood by them; moreover, regular anonymous teacher-evaluation mechanisms also exist. Together, these operate as devices of 'defensibility' that are an important corrective to possible misuse of the system.

Apart from this, monitoring systems at the highest level in the university should conduct random or regular checks and raise a flag if too many, in a particular course, get a very high grade or there are too many failures in another course. Statutory bodies of the universities and the funding agencies need to enforce these minimal norms in all universities, especially when some teachers may still engage in private tuitions. Control over internal assessment might allow a teacher to use this to influence students to join his or her private tutorial classes.

Grade inflation is common amongst our educational institutions. Sometimes it is the somewhat shortsighted approach of faculty members trying to be popular amongst students, perhaps to also attract them as research students. Such populist measures are counterproductive towards developing good academic standards. Institutional cultures and peer pressures must work towards curbing such tendencies. The more serious problem is when the whole system is flawed.

There have been instances in which a university is known to have scaled the highest mark obtained by a student in the class to the highest grade and then graded all other students accordingly. Thus, the grade obtained does not reflect the student's capability, making a mockery of the whole process. This has sometimes gone unnoticed for years, reflecting a basic lack of understanding of grading and how it operates. The highest grade should normally be given to the exceptional or very good students so that the university-given grades have some sanctity. Often, there may be a great deal of clustering in marking or grading with the whole range of grades available not being utilized. One remedial measure might be to organize well-planned tutorials or workshops for teachers, students and examination administrators so that the process is well understood. Credits and grading also need to be reasonably uniform across the country, which would enable students to move more easily between different universities and institutions. There are also further questions. For instance, one might ask what is being evaluated? In a paper on physics or political science should we give as much importance to spelling and grammar as in papers on language? There are no straightforward answers to such questions but some parameters need to be set in place that might guide teachers engaged in evaluation.

It must be noted that NAAC does speak of evaluation in higher education institutions. It mentions enhancing the competence of students and putting in place 'innovative evaluation processes' to gauge the skills and knowledge of a student as acquired at different levels of an academic programme. It also speaks of reforms in evaluation and the features of both confidentiality and transparency in examination processes. However, it should be noted that there is no specification or breakdown of what all these are to mean at the operational level. When requirements are clearly delineated they refer to largely conventional, if also important, arrangements: the time it takes for the declaration of results, the mode of their publication, invigilation and examination logistics, redress of grievance modalities and efforts to streamline the work of the office of the Controller of Examinations. There is no mention of internal (during-the-semester) assessment mechanisms. As we have brought out in this section, it is precisely the unmentioned detail that requires elaboration, for the devil lies in this.

3. The Research Process

In this section we turn to the issue of the research process, with particular regard to students engaged in supervised research activities in our higher education institutions. We explore a range of questions and problems that emerge at each stage: right from the moment of choosing of a research guide and topic to monitoring of progress and its final assessment when the research is published and/or produced as a thesis. While public debates concern themselves with the quality and quantity of research *output*, of faculty and of research students, and the relatively small contribution to the global research output, our gaze is focused on what goes into the making of a research product and in how these processes can sometimes be so deeply flawed that poor outcomes are actually entirely unsurprising.

Thousands of students especially those who have opted for an academic career aspire for a doctoral degree for academic appointments, promotions and social mobility. This desire is so strong that a private university in one of our smaller states, Meghalaya, managed to award thousands of doctoral degrees for high fees over a few years, making large sums of money till the Governor of the state

stepped in to stop the racket. This may be an extreme case, but awarding doctoral degrees in the absence of significant work is widespread in our universities and almost built into its structures. Without trying to address this issue honestly it is almost meaningless to enquire why none of our universities are amongst the top 200 or so.

One of the first questions to be regarded is that of research guidance. For a research scholar, the period of doctoral research is probably the most creative and energetic period of her/his life where she/he may spend five or more years working long hours on a problem, without the assurance of a job at the end. Clearly the supervisor and the university or institution have a shared responsibility to provide opportunities and guidance to the student to develop technical, analytical and other skills to grow into a good researcher and academic.

Therefore, the choice of guide is a crucial issue. Is being a faculty member even with a few years of experience at teaching an adequate criterion to be allowed to guide a doctoral student? If there are only a few students and many faculty members available, and the students are given the choice to work out who would be their guides, they might gravitate towards the more active and academically alive faculty members working on problems the students are interested in. This is often the case in many of our leading research institutes. However, in universities there is often a very high demand for guides with large numbers of aspiring research scholars, particularly with the imposed limits on the number of students per guide. Under such circumstances, it is important to set standards on who should be allowed to guide if one is serious about the quality of the research output.

If a faculty member is not an active researcher herself/himself, with no significant publications over the previous three years or so, it is quite natural to expect that she/he may not be able to effectively guide a doctoral student. Yet, periodic review with regard to suitability of faculty for guiding students is not considered necessary, nor do universities even apply the measuring rod of the faculty's own research productivity and output for ascertaining supervisory competence. Despite UGC rules to the contrary, there are cases of supervisors having a very large number of students, to whom they are unable to allocate sufficient time or attention.

The next concern is with the viability and quality of the research project being assigned to or conducted by a doctoral student. Though universities have reviewing processes in place to pass a student's proposal or synopsis, these are not always effective. We have seen that departments, even in well-known universities, can become very defensive about their procedures and seek to have a high approval rate for research proposals. In these cases, external reviewers from other departments or outside the university are assiduously avoided and students—even those with substandard literature surveys or statements of the problem—are routinely passed with the mild comment that they will work out the gaps with their supervisors. The desirable process of the review of a project by a suitable committee, with an external member to make the process more objective and critical and to bring in new suggestions and ideas to enhance the scope of the project is effectively and indefensibly jettisoned.

Further, though research supervisory panels are critical, these are neither mandated by the UGC guidelines nor are in place in most institutions. These are important not only for monitoring progress but also for addressing any technical or other difficulties a student may face, including guide–student relationships. On the other hand, in many universities the emphasis on the supervisor–student relationship is sometimes taken so far that students are actively discouraged from discussing their work with other faculty or taking inputs from them. Improvement in the quality of work and academic growth of a student is achieved by discussion and debate, and learning different aspects from the pool of resources that may be available in an institution or department. It is essential to encourage this rather than advise against it.

Neither are annual progress seminars operational in most universities. Thus, students are not required to present their work at least once a year before a research panel, which can monitor their progress and give better direction to the work. Even where such seminars are held, there is a general lack of a culture of questioning, which is so essential for research. We have very often seen that supervisors are defensive and do not desire their students to be closely questioned by their colleagues. It is all too common to see a faculty

member jump in to answer a question directed at her/his student in a seminar, rather than let the student think through the question and answer it on her/his own, a training which is so essential for her/his growth.

A student is today obliged under UGC rules to do some amount of coursework preliminary to the research component of the doctorate. Though a comprehensive examination is not mandated, universities are left to decide the minimum qualifying requirements for students to proceed to the next stage. These are all necessary interventions but depend a good deal on strict processes being put in place by particular universities. In fact, rigorous research methodology courses, or courses which seek to develop the research and writing skills of students and familiarize them with ethical guidelines and procedures are rarely offered even in the better universities and departments.

To improve the quality of doctoral theses, UGC rules require that at least one paper based on the thesis work be accepted for publication in a refereed journal. This objective has been circumvented by the proliferation of a large number of research journals of varying quality, all claiming to be refereed ones! It would be prudent to insist on acceptance of at least one to two papers by a premier research journal of the discipline. For identifying the ones to be considered as premier journals, one could adopt the Thomson-Reuters list to start with, and add those journals which are felt to be of a similar standard by leading academics of the discipline. This would help improve quality and reduce plagiarism, besides of course minimizing the chances of a wrong result being accepted for a doctoral thesis. It will also promote visibility of the young research scholar to the global academic community. The doctoral theses of many leading universities are not available on the web, while there is no dearth of academics crying hoarse about transparency. It is also essential to ensure that all theses go through a plagiarism detection mechanism especially when so little of this research is published.

Academic ethical guidelines including those for authorship of publications are also unaddressed in most institutions. In the extreme case, demands of authorship by 'guides' who have made no significant contribution to the work is unethical, and students usually have no

easy recourse to address these issues. For example, in India, students in many research institutes submit their theses to the university which recognizes their institute. For administrative purposes, the student is attached to a nominal guide from the relevant university department. It is not unknown for these nominal guides to demand authorship of papers without having a clue as to the content of the paper, and being clearly unable to defend its contents. Students often succumb to such demands to avoid unnecessary hassles and delays in the submission of their theses. On the other hand, the contrary is also sometimes true that students fail to recognize the contributions of their guides or supervisors especially after the degree is obtained!

Research scholars are by and large a vulnerable community. For example when cases of plagiarism are found and highlighted, the immediate response of the supervisor is usually that s/he had not read the paper carefully. The blame is squarely put at the student's doorstep! If true, it begs the ethical question whether the supervisor should have been a joint author? Both students and supervisors need to go by an honour code where credit is given where it is due and properly acknowledged.

Examination of a thesis and conducting of a viva voce also need scrutiny to ensure that these are objectively and fairly done. Some institutions have tried to put structures in place towards this end. For example, in IIT Guwahati, a thesis is not sent to the supervisor of the supervisor. Sometimes fields may be highly specialized and there may not be too many experts within the country. Nevertheless, for institutions it is important to keep track of how frequently a particular examiner is being used. In the day of the internet where theses can be sent rapidly via e-mail and viva voce could be conducted by leading academics in the field from anywhere across the world using skype or video conferencing facilities, there is ample scope of widening the possibilities of examiners. However, most of our universities are too rigid to permit holding of a viva voce via skype, which naturally leads to calling someone from the neighbourhood, thereby saving costs but severely limiting the possibilities. A PhD degree may be obtained by sending theses to a mutual set of 'friends', all colluding in the promotion of mediocrity.

The UGC correctly mandates that the viva voce and thesis be openly defended. In The Netherlands, a student defends about a dozen pre-selected general topics outside the thesis topic in his/her thesis defense—in addition to the thesis work. For example a student studying distant galaxies may choose to defend the view that there are not enough parks in Groningen. After all a student is getting a degree of a Doctor of Philosophy!

Our scientific output although on the rise is about 4% of the global output, while for the average citation per paper we are ranked about 160th or so amongst all nations. If India is to make a global impact with an accelerated rate of growth of its academic and scientific output, there is no choice but to rejuvenate our universities and ensure that new ones do not fall into the same morass. Towards this end, elimination of a culture of 'yes sir/ma'am', encouraging and facilitating a spirit of enquiry and debate, putting in place institutional structures and processes to encourage adherence to strong ethical standards and to recognize and promote merit without trying to merely appease are all essential components.

4. Two Unitary University Models

In recent efforts to build up our capacities for higher education the UGC and MHRD announced plans of converting 45 autonomous colleges into universities as part of the Rashtriya Uchchatar Shikhsa Abhiyan (RUSA) programme. While the large-scale conversion of autonomous colleges into universities may help increase the number of students pursuing higher education and could perhaps lead to improvements in the infrastructure of these institutions with the availability of greater resources, one cannot shy away from the other crucial elements that go into making a university an academically vibrant place and a generator of new knowledge and skills, rather than only a transmitter of learning.

Another path which the UGC took to create new universities was the recognition of institutions as 'Deemed to be Universities' after a due process of evaluation. In the Tata Institute of Fundamental Research, already internationally known for the quality of its research, this

recognition has enabled the graduate student programme to function with greater flexibility and efficiency. Another Deemed University, the Tata Institute of Social Sciences has also done well, expanding its programmes, student intake, and presence across the country; however, a cursory glance at many other such 'deemed' institutions casts doubts on whether this path will lead to establishing universities of excellence in our country.

In this context, it is worth reflecting on the experiences in recent times of building universities on the foundations of colleges, which have had a rich and distinguished history. Two somewhat different paths are highlighted here: one, termed the 'Presidency model' for conversion of Presidency College, Kolkata (established in 1817), into a university in 2010, and the other termed the 'Cotton model', where the new university, christened as Cotton College State University (CCSU) was created in 2011 with Cotton College, Guwahati (established in 1901) as a constituent college. The conversion of Ravenshaw College, Cuttack (established in 1868) into a university in 2006 is essentially similar to the Presidency model. All three are state-government institutions and required legislation on the part of the respective state governments to bring about these changes.

In the creation of these universities, one of the crucial problems was how to deal with the existing staff and faculty in the colleges. In the Presidency model, the college was essentially dismantled: all faculty positions went to the university and those administratively tied to the college, such as the post of Principal, were abolished. College faculty had the option of being considered for appointment to the university or being transferred to other government colleges. Of those who chose the former option, some were selected while others were not. Presidency University virtually reinvented itself, recruited many promising as well as well-established academics, and worked hard to earn the status of an Institution of National Eminence from the UGC. Despite teething troubles and although its statutes were not in place during 2013, the university made considerable progress. Presidency alumni have been involved in the process of developing the new university; in fact, one of them redesigned the logo giving it a modern and futuristic look.

In both models, the inheritance of an illustrious history is expected to be the starting point for developing a new future for these institutions. The effort should be on enhancing the symbolic capital of these institutions, rather than on holding on to particular positions or specific structures. Both Presidency and Ravenshaw took the difficult decision to transfer out a number of existing faculty. They have shown a strong commitment to selecting the best candidates, an element critical to the building of a good university. In fact the Ravenshaw University Act, 2005 explicitly states that 'the University shall take special measure to facilitate students and teachers from all over India and abroad to join the University and participate in its academic programmes'.

In such conversions, one of the challenges that might be faced is that existing faculty may or may not qualify for university positions according to UGC norms formulated after the 6th Pay Commission, even though they may have de facto taught at both undergraduate and postgraduate levels for several years. A university to be excellent must nurture research and teaching. Its teachers have to be top-notch but they must also generate knowledge. All college teachers may not meet the UGC API requirements. At the same time, as we have already seen, API norms, since they have been framed keeping in mind the huge diversity of colleges and universities across the country, constitute only minimum requirements. In fact, these requirements are by international standards unsustainably low; universities and institutes of excellence must and do demand much higher-than-UGC requirements when they recruit faculty.

In both Presidency and Ravenshaw a significant fraction of the existing faculty transferred to other government colleges. West Bengal and Odisha have several state-run colleges to which the teachers could be transferred. The two universities held open recruitment for new faculty, a process that is fundamental for the success of this kind of model. It should be noted that such a course may be difficult to implement in every case while undertaking the large-scale conversion of autonomous colleges into universities across the country.

The case of Cotton College in Assam bears closer scrutiny. The government of Assam has steered clear of some of the difficulties posed

in the establishment of Presidency or Ravenshaw by making Cotton College a constituent college of the newly constituted university via the CCSU Act. Accordingly, both college and university exist and a synergistic relationship can develop between them with appropriate institutional structures in place. By the Act, undergraduate teaching continues within the college, while postgraduate departments are within the new university. Teachers from the college who fulfil the requirements are free to apply to the university to all posts through an open selection process.

Thus, firstly, these articles of the Act ensure immediately that teachers are not transferred from the college. In Assam there are at present very few government undergraduate degree colleges, e.g., those in Diphu, Haflong and Kokrajhar, and it may be difficult for teachers to relocate. Secondly, a space is opened up for teachers from across Assam, including from its other colleges, to apply to the new university. Thirdly, the university can also initiate a process of selection of faculty for its current as well as proposed postgraduate departments, from within the state and from elsewhere within or outside the country. This is being done and is essential for building up the new University.

Apart from these crucial aspects, there are other distinct advantages to the 'Cotton' model. Cotton College, as with Ravenshaw or Presidency, has been best known for its undergraduate teaching. It is being increasingly realized today that undergraduate teaching is the basis of excellence in higher education, for if there are no high-quality feeder colleges postgraduate programmes in the universities will languish. Yet, the status of undergraduate teaching has over the years been undermined with the spotlight shifting to higher levels.

The 'Cotton' model helps to reinstate and revive the importance of undergraduate teaching. With the establishment of the new university, for the first time in its 113-year-old history, teachers of Cotton College had the opportunity to frame their own syllabi in accordance with their interests and specializations, current developments in the different fields, and a focus on the region. The model enables the infusion of greater accountability in teaching and systems of evaluation, examination and periodic revision of syllabi that would greatly bolster undergraduate

studies. The development of the university means that new recruits could take classes at the undergraduate level, while teachers of Cotton College could take postgraduate classes and could strengthen their research capacities by coupling with university faculty on joint projects, applying for funds, holding seminars and conferences or even setting up laboratories and research networks. This would also enable the college faculty to build up a stronger research profile if they wish to apply to the university at a later point.

Approximately 85% of our students in the higher education system are undergraduates, and building up a strong academic foundation at this level is an essential requirement for the general improvement of the quality of higher education. Four-year undergraduate programmes linked to a Master's and research programmes as in the case of IISc, or integrated undergraduate and postgraduate programmes as in the IISERs and NISER are interesting and viable approaches. However, the establishment of a good university with either one or a limited number of good constituent colleges, as envisaged in the 'Cotton' model, is a viable prototype that could contribute significantly towards improving higher education standards and its progress may be carefully watched. In the end, the focus needs to be always on how to build a quality university and to provide the best possible education to 'develop the critical qualities of mind and durable qualities of character' of the largest numbers of students. In this regard, despite numerous challenges, the 'Cotton' model, with appropriate institutional structures in place, also offers a viable option which helps enhance the academic standards of the college in the process of laying in place the foundation for a university of excellence.

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