

Are semester system, 'smart' classrooms and online teaching serving the purpose?

Professor S. C. Lakhotia
BHU Distinguished Professor and SERB Distinguished Fellow
Cytogenetics Laboratory, Department of Zoology, Banaras Hindu University, Varanasi 221005
(email: Lakhotia@bhu.ac.in)

Educational system in the country is under severe strain. A variety of reasons are contributing to the declining quality of education being imparted so that more and more of the young degree holders turn out to be unemployable by industry as well as academia. A common refrain of most academic institutions that admit young students to PhD courses in various disciplines is that the pool of applicants available for selection is generally poorer than in the past. This applies not only to students graduating from most of the less endowed traditional universities but also to a large proportion of those who had the privilege of studying in the new and better funded IISERs and IITs. Where have we gone wrong?

In order to provide greater flexibility in subjects learnt by a student and to reduce the burden of year-long learning to be examined through a single examination, the annual system was replaced by semester system. This was expected to keep the students engaged in the learning process regularly and the newly acquired knowledge would remain fresh in minds for assessment of their learning curve. In order to provide flexibility in learning of topics of interest to different students, credits and choice-based credit systems became part of the semester pattern. Post-2000, all colleges and universities have adopted semester system in all courses. In most institutions, the semester system has been introduced by splitting the annual curriculum into two parts, corresponding to the odd and even semesters. The choice-based credit system and portability of credits within an institution or across different universities in the country, although commonly talked about, are still to be implemented at most institutions of higher learning in the country.

The information technology revolution that became palpable in the later part of 20th century had a profound effect on teaching-learning process. An exponentially increasing quantity of information is becoming available to anyone at the click of mouse or key. This led to

birth of virtual classrooms and online learning. The old chalk-and –board dependent physical classrooms also metamorphosed into ‘smart’ classrooms with facilities for LCD projectors, interactive boards and webinars for long-distance online learners. Diverse kinds of online courses like Massive Open Online Courses (MOOCs) are being increasingly encouraged. The current COVID-19 pandemic has enforced online teaching at an unprecedented level across the world, including in India. Because of the lockdown, even all school children are required to get used to online classrooms through online lectures or pdf files made available by the teacher.

It sounds paradoxical that the semester system that replaced the annual system to reduce the scourge of rote learning, and the ‘smart’ and online classrooms that permit availability of all information at the click of a mouse, should produce degree-holders many of whom neither possess the required knowledge nor the thirst for it. One could argue that the current generation of students has a more focused attitude so that when assessed on a broader perspective, they do not fare but are better versed in a limited sphere. However, this does not appear to be true especially when we consider those who opt for academic career. A general complain from academic institutions across the country is that a majority of students who seek opportunities for enrolling at PhD programmes are not well prepared and even many of those who qualify through various tests, lack focus, perseverance and a wider knowledge-base that is necessary for good quality research. More worryingly, even common-sense general knowledge is also often missing or grossly inadequate.

A major factor responsible for such a sad state of preparedness of the young generation for academic careers is obviously the quality of training imparted and acquired during the formal classroom learning phase. I would like to argue that the semester system, as practiced in most of our educational institutions, the so-called ‘smart’ classrooms and a greater reliance on online learning are majorly responsible for the overall decline in academic competence of emerging graduates. Having taught for long years in the annual as well as semester system, my impression has been that semesters provide lesser time for actual teaching/learning in classroom since a significant time of each semester is consumed by assignments, mid-term and end-term assessments. Our curricula were switched to semester system without adequate preparation and infrastructure. With large numbers of students per course to be taught by a

single teacher, without the support of any teaching assistants, each teacher gets enormously burdened with teaching, and mid-/end-semester assessments. As a consequence, teaching often becomes a chore to be finished without worrying for the outcome. The chronic shortage of teaching faculty at most colleges and university implies that a given teacher has to handle multiple courses in both the semesters. The students also remain burdened all through the semester worrying mostly about the semester grades rather than what they are learning. In the absence of adequate training and resources, the semester-assignments provide a fertile ground for students to plagiarize.

Holistic and integrated learning of students is also affected when the different courses attended by a student remain disconnected. This can be further aggravated by the choice-based credits which may permit students to collect credits through courses that may have better 'market value' but do not adequately connect with the main discipline that the given student majors in.

The excessive reliance of the so-called objective and multiple-choice questions at the semester examinations as well as other entrance tests also severely affects the learning curves of students. In the absence of need for writing long answers in a formal text, most students fail to develop the art of writing and expressing themselves in a coherent manner. The more frequent use of various social media has also encouraged poor language skills. Consequently, when it comes to a research manuscript or thesis writing, the supervisors have tough time.

Any effective classroom teaching is a bidirectional interaction between teacher and the taught. Unfortunately, most 'smart' classrooms that majorly depend upon showing power-point or online projections in a darkened room deny such bidirectional interactions. Such practices may, in many cases, be only a shade better than in the old-fashioned classrooms where the teacher would dictate 'notes'. Often the teacher in the relatively darkened 'smart' classroom may not even know if some students in the classroom are actually engaged in something else. It is a common experience that many students simply want a copy of the ppt file that teacher has prepared. Without an interactive classroom, the learning would remain grossly incomplete for most students. They may gather some facts and information but they would miss

comprehensive knowledge and understanding required when they start their professional or academic career.

The increasing emphasis on online learning has additional issues to worry about. First is the availability of reasonably good internet connectivity. While many urban areas in the country have variable levels of connectivity (dependent also upon the electricity supply), a large part of rural and semi-urban India continues to be without any or consistent internet connectivity. A large number of governmental and other public schools, especially in rural and small town areas, do not have the infrastructure for online learning. Many of them do not even have a formal classroom or the minimal number of teachers. Likewise, while the more affluent segment of the society can afford pc/laptop/i-pad or smart phones for their wards, the much larger economically weaker lower middle-class and poor families would not find it possible to provide such gadgets. Obviously, the present decision in the wake of KOVID-19 pandemic that all academic institutions (schools, colleges and universities etc) must continue with online teaching would push a larger segment of student population further back in their learning curve.

Besides the unavailability of the hardware for online classrooms for a large segment of students, equally worrying is the quality of learning that is being offered in the name of online teaching. It is generally agreed that the overall quality of teachers in schools and higher educational institutions is below the minimally expected. If they are poor in classroom chalk and board teaching, what could we expect of them when they engage in online teaching? Such online classrooms would get reduced to monologues, often boring, where the teacher records a speech and sends to students by WhatsApp or similar other apps. The questions and answers in schools also get similarly passed on as pdf file to students with no provision to monitor if the students are reading and learning anything. In the name of COVID-19 pandemic, all students would get promoted to the next level without any sensible examination. This obviously would have seriously damaging long-term consequences. It is understood that provision for obtaining online degrees may also soon be made.

The compulsion to follow the so-called semester system because the so-called 'advanced' countries started using it, and because the current undue emphasis on 'ranking'

criteria provides more scores for semester system and 'smart' classrooms, is unfortunate. Such technology-driven 'smart' classes and online learning modules may benefit commercially oriented academic institutions but not the serious student community, especially in view of the huge population and the very poor infrastructure prevailing at most of our academic institutions.

If our classroom teaching and evaluation systems follow good pedagogy, the old annual system may appear to be as good or better suited to our conditions. While online learning provides very good opportunities to anyone of any age for knowing about diverse things, excessive reliance on this mode for formal education is fraught with multiple issues. The bidirectional interactions between teacher and students and between students themselves that occur in a conventional classroom are very critical in shaping the individual's life-perspectives and personality. Online learning alone cannot provide such essential social interactions. Online learning can at best be a supplement to good learning in a classroom. It must not be forgotten that as a social animal, humans learn many things consciously and unconsciously through personal and group interactions. These are almost entirely missing in the online mode. Unfortunately, the current rate of invasion by the online learning systems would cause the physical classrooms to become virtual while the virtual classrooms may become the reality! This may be good only in a limited sense but ominous for the human society in the larger context.

I am conscious that advocating for annual system and chalk-and-board teaching may be considered by many as retrograde. However, they should not be discarded just because these were in practice in yester years. I believe that the hastily planned and poorly executed decisions about semester system, 'smart' classrooms, online courses and online degrees need serious discussion by the academia since the long-term consequences of the present state would be seriously damaging for the young generation and, therefore, the nation.