

Quality deprivation through quality assessment: the academic score system in Indian higher education

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Abstract

In this paper, we have tried to briefly review the current appraisal regulations of the University Grants Commission (UGC), the research/academic score scheme [previously called Academic Performance Indicator (API)] in the higher education system of India. These scores henceforth in the text are referred to as academic scores. Over the years, the quality of research and teaching in the country has been badly affected due to these scoring schemes. This article systematically analyzes the reasons for the failure of these scoring systems in the appraisal, which are used for the promotion and direct recruitment of teachers in Indian Higher Education Institutions (HEIs) (universities and colleges). Additionally, we have devised suggestions for further improvements in the existing system. It is argued that the issue of quality assessment consists of solving the problem of imperfect information, which requires the identification of the signals that represent the quality of the work with minimum error. The article suggests that in this current state of deprivation and inequality of research in the Indian HEIs, emphasis should be on the quality of research rather than on quantity. The article also suggests an alternative evaluation system of appraisal to achieve this objective.

Keywords

Academic performance Indicator; Research/Academic score; Appraisal; University Grants Commission; Research quality; Indian Universities.

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Introduction

The concept of modern education in India finds its roots spanning over the late eighteenth to the early nineteenth century when the country was under British rule. The pages of history witness that the visionary Indian leaders like Raja Ram Mohan Roy (1772-1833), Swami Dayananda Saraswati (1824-1883), Rabindranath Tagore (1861-1941), Swami Vivekananda (1863-1902), Annie Besant (1847-1933), Mahamana Pandit Madan Mohan Malviya (1861-1946), Sir Sayyid Ahmad Khan (1817-1898), Sri Aurobindo (1872-1950), Manabendra Nath Roy (1887-1954) and Jawaharlal Nehru (1889-1964) etc. were well aware of the scope and consequences of modern education in India. The foundation of the historical Institutions of higher learning such as Banaras Hindu University (1916) and Aligarh Muslim University (1920) reflects the vision of these great leaders.

The government of India has been continuously making tedious efforts to improve the quality of research and teaching in our publicly funded educational institutions. A recent report states that there are more than 700 universities in India (www.ugc.ac.in). These include numerous publicly funded as well as private Institutions and universities. Some of these universities such as Banaras Hindu University (1916), Aligarh Muslim University (1920), University of Allahabad (1887), University of Calcutta (1857), University of Lucknow (1867) and University of Madras (1857) were founded almost a century ago, whereas others like Central University of Bihar, Central University of Gujarat, Central University of Haryana, Central University of Himachal Pradesh, Central University of Jammu and Kashmir, Central University of Jharkhand, Central University of Karnataka, Central University of Kerala, Central University of Orissa, Central University of Punjab, Central University of Rajasthan and Central University of Tamil Nadu came into existence by an Act of the Indian Parliament in 2009. However, the irony is that none of the Indian Universities could carve a place in the list of top 200 world institutions of higher learning despite the several initiatives being taken by the union government, state governments and the University Grants Commission (UGC) for improving the higher education sector (Hasan, 2015). This is a matter of concern that flashes a signal of apprehension, keeping in view the current era of globalization, privatization, and liberalization. Does this not provide us an opportunity as a nation to ponder over?

The primary focus of a Higher Education Institution (HEI) is teaching and research. For ensuring the quality of research and teaching in any educational organization, an efficient mechanism of quality control needs to be put in place. For the Indian institutes of higher learning, to carve a place in the list of the top HEIs of the world, an efficient evaluation system needs to be introduced. In this context, the UGC introduced an academic score system *via* its regulations on minimum qualifications for appointment of teachers and other academic staff in the HEIs and measures for the maintenance of standards in higher education 2010, that were further amended in 2011 (1st amendment), in 2013 (2nd amendment), in 2016 (3rd & 4th amendments) and in 2018 (www.ugc.ac.in; GOI, 2010; 2011; 2013; 2016; 2018).

The introduction of the academic score system aimed to achieve two objectives, the first objective being to assess the quality of the candidates who apply for the recruitment against advertised faculty positions and subsequent selection of the best candidate among the applicants. The second objective was to assess the academic quality of already working faculty members in the HEIs, when they apply for their promotions under the Career Advancement Scheme (CAS). However, it has failed miserably in achieving these objectives despite many attempts made to correct it. With each of the amendments in the UGC regulations 2010, things are becoming more and more complicated with no clear outcomes as regards its principal objectives. On the contrary, this scoring system has led to the wasting of time and resources, and might even have negatively affected research and teaching. It has even badly affected the domain of knowledge through the mushrooming of books of substandard quality and predatory journals. The term ‘predatory journals’ was coined for the publications that have poor or almost no peer-review system and which are primarily focused on minting money from their gullible prey and where the editorial board of such journals has usually no established academic credibility in their respective fields of specialization (Karlsson, 2017; Lakhotia, 2015).

A desired, minimum number of publications for being eligible for a faculty/scientist position or obtaining a doctoral degree is mandatory in HEIs across the country. This kind of score system, which pushes junior and senior level researchers to get published in quantity rather than focusing on the quality of the literature they generate, has led to the advent of “predatory journals” in the last decade. It is an obvious phenomenon because necessity is the mother of invention and hence it has elicited in the mushrooming of numerous unscrupulous publishers

to start new ‘open-access’ predatory journals. In this era of post information technology revolution, high speed global internet connectivity permits the comfortable management and publication of journals even with a single laptop with a moderate configuration. These journals publish almost any research paper for a processing fee (Perry, 2015).

In the UGC regulation 2018, the old term, Academic Performance Indicator (API) (GOI, 2010), was replaced by research/academic scores (GOI, 2018). In this revised scheme, it has reduced the scale of scores while everything else remained the same. To maintain the quality of research, UGC has created a journal screening committee, which has released a mammoth size list of about thirty-eight thousand journals, which are indexed in *Web of Science*, *Scopus* and *Indian Citation Index*. These journals are from all disciplines and recommended by different HEIs from across the country. However, in this whole exercise, a number of journals of substandard quality were added to this UGC’s ‘white list’ of journals. Later UGC’s screening committee further reduced this list using nine different criteria for maintaining the quality of the research. Ultimately, UGC issued an amendment to its regulation 2018, which instructs that only the research papers indexed with *Web of Science* and/or *Scopus* will be considered for calculating the academic scores. This is an admirable step towards achieving quality research in Indian HEIs. However, this amendment of the UGC is only applicable for science subjects, and hence there is still uncertainty regarding other disciplines such as social sciences, humanities and languages. The UGC is working in this direction through evaluation reforms, which are one of the five objectives of its quality mandates, in order to improve the quality of higher education (for details please refer to the footnotes)[#].

Therefore, it is important to have a logical analysis of this academic score system based on its implications for quality research and teaching. Though a few studies have pointed out the problems of this system previously (see Das and Chattopadhyay, 2014), they have not systematically analyzed the process which leads to its adverse effects. Such an analysis requires the examination of the dynamics in the strategies adopted by teachers (or researchers) in response to this academic score scheme of the UGC. Many of them could try to use loops and holes, which exist in this score scheme, to earn easy academic scores. There should also be

a cost-benefit analysis of these regulations in terms of time and resources potentially consumed, and the possibility of improvement of the system.

The methodology followed in this work is focused on the content analysis of various regulatory documents issued by the UGC (from time to time) regarding the various academic quality parameters to be used while screening and evaluating applicants for teaching and research positions and in the Performance based appraisal system (PBAS) of already working faculty members for their promotions through CAS in Indian HEIs.

The article is divided into four sections. The first section is the introduction; the second section discusses API introduced under the UGC regulation 2010 and subsequent amendments to it, along with the newly introduced research/academic score scheme *via* the UGC regulation 2018 and its amendments. The third section analyzes the possible reasons for the failure of these academic score schemes in achieving the improvement in the quality of research and teaching considering the problem to be of imperfect information. It is argued that the present system has failed as it uses indicators (or signals) which are easy to fake. Many of these indicators lead to waste and distortions in the education system. This section also makes suggestions to solve the problem. The manuscript ends with the fourth section, which summarises the concluding arguments regarding the use of academic scores for quality research and teaching.

1. The academic score system of the UGC

The following levels of academic staff exist in Indian HEIs, in order of seniority: senior professor, professor, associate professor, and assistant professor. The academic score system has been introduced by the UGC for quality assessment of the candidates for direct recruitment at the level of associate professor and professor. PBAS of the UGC is also applicable for the promotions of all faculty members under the CAS for different stages.

As per the initial UGC regulation 2010, API scores were to be awarded under three categories: category I: teaching, learning and evaluation related activities; category II: co-curricular, extension, professional development, administration and governance related activities; category III: research and academic contributions (appendix-III table I; GOI, 2010) (www.ugc.ac.in; GOI, 2010). For the

promotion of a faculty member from one stage to the next higher stage under CAS, they have to acquire the minimum prescribed API scores from each of these three categories. For the direct recruitment to the post of associate professor and professor, a candidate has to acquire 300 and 400 APIs respectively from category III, that includes research papers, research publications (books, chapters in books, other than refereed journal articles), research projects, research guidance and participation in training programs and presentation of papers in conferences/seminars/ workshops (GOI, 2010). However, according to a 4th amendment (GOI, 2016), this score should be acquired cumulatively from category II and category III.

The ultimate motive of the academic score system of the UGC was to boost the productivity of the faculty in Indian universities and to motivate the serving faculty members to improve the quality of teaching and research. However, the UGC regulations unfortunately led to the rise of low quality and mediocre publications across the country. As a consequence of the UGC regulation 2010, a large number of teachers and researchers started publishing their books, chapters in edited books and their articles using the ‘predatory’ publishing houses, which are known for producing low quality and mediocre publications as mentioned above.

These attempts of the teachers and researchers were merely for the sake of acquiring academic scores, thereby compromising the quality of research and available study material. The high demand of publications resulted in the opening of ‘tuck shops’ that started publishing books and papers with low quality. The researchers and teachers published their work in these low quality publications. An analogous situation also appeared with regards to presentations in conferences, workshops, and symposia. These events, instead of serving as the platforms for scientific deliberations, became mostly an occasion for distribution of certificates by receiving a registration amount from the participants.

In order to stop this, the UGC issued the 2nd amendment to the initial regulation in 2013. The 2nd amendment introduced a capping mechanism in the various parameters for acquiring API scores listed in category III, giving more weightage to research papers, books, and research projects. However, the capping of various parameters could not curb unethical practices. This led the UGC to make a 3rd amendment in the regulation in May 2016 (www.ugc.ac.in; GOI, 2013; 2016). The 3rd amendment to the UGC regulation has modified the parameters acquiring the API (appendix-III: table I of 3rd amendment, of the UGC regulation 2016; GOI,

2016). As explained above, its purpose was to curb unethical practices, and it has reduced such practices to a certain extent. However, this amendment has also increased the workload of teachers in terms of hours per week. This increase in workload led to widespread protests by the teaching community in the country. Due to the protests, the UGC came up with the 4th amendment in July 2016, which maintained the workload of teachers as per the initial UGC regulation 2010. One of the important changes in the 3rd and 4th amendments was regarding the mechanism of acquiring API scores. As per the amended regulation, API scores will be given only for the articles published in UGC notified journals. An important change made in the 4th amendment is that teachers and researchers can also use API score acquired under category II for direct recruitment. This provision essentially means that one can become eligible for direct recruitment without any serious research. Even the amended category III and list of UGC proposed journals are far from solving the problems of poor quality of research (it is discussed in detail in the next section) (GOI, 2010; 2013; 2016).

In the UGC regulation 2018, the assessment criteria and methodology for HEI teachers, librarians and directors of physical education and sports are given (GOI, 2018). For the direct recruitment at associate professor level, there is a need of a minimum of 7 publications in the peer-reviewed UGC-listed journals and a total research score of seventy-five (75) as per the appendix II, table-2 of the UGC regulation 2018 (GOI, 2018). While for the post of professor in the direct recruitment, one needs a minimum of 10 research publications in the UGC-listed journals and a total research score of one hundred twenty (120) as per the appendix II, table-2 of the UGC regulation 2018 (GOI, 2018).

The role of the research/academic score in the UGC regulation 2018 is almost the same as that of API the in UGC regulation 2010, only with the reduced scale of the scores and some improvement to ensure quality research. For instance, now the minimum score required for the direct recruitment at professor and associate professor level is 120 and 75 score points respectively as explained above, which were in the earlier regulation 300 and 400 score points respectively. The score points given for each of the academic activity was also reduced proportionately. For instance, previously, for publishing a paper in a peer reviewed journal, the score points given were 25, which has been reduced to 8 in the current regulation (GOI, 2010; 2018). The quality in research has also been ensured through the introduction

of a clause that the research papers published in only *Scopus* and *Web of Science* indexed journals will be considered for science streams. The bar of a fixed number of papers within the required time span is still an obstacle to the good quality of research for both selections in direct recruitment and promotions under CAS from one stage to another.

On the other hand, for the promotion from one academic level to the next under the CAS a certain academic score is required. For the assessment of promotion of faculty members from one academic level to another, there is a need of a 'satisfactory' or a 'good' grade in annual performance assessment reports of each of the years during the entire assessment period, along with the bar of certain numbers of research papers, orientation course/refreshers course/ workshops attended and a minimum number of Ph.D. candidates supervised along with a minimum academic score, for promotion to associate professor, professor and senior professor respectively (GOI, 2018).

Despite various regulations and multiple amendments being issued by the UGC as described above, several ambiguities and confusions arose regarding the implementation and impact of these regulations. For instance, the fate of the articles which are published in journals that fail to make it to the UGC list or which had been published in the journals, which were in the list at the time of communication but are now unlisted is uncertain. UGC should not have issued such unsustainable guidelines. These redundant publications which failed to remain in the UGC list may have caused waste of resources and energy. In the next section, we discuss the potential reasons for the failure of this scheme.

2. Why did the academic score scheme fail and what can be done about it?

Successful policy requires a good understanding of the activity it intends to influence. After that, the policy makers need to envisage, the strategies, which may be followed by some of the people, who may attempt to bypass the outcomes of the implementation of the new policy. Based on these two factors, one may predict whether the policy will achieve its objectives or not. The same basic notion applies to the rules aiming at promoting the quality of research and teaching. In order for a rule to be effective, it must be based on a thorough understanding of research and

teaching practices. The wrong understanding of its anticipated impact may be detrimental to the cause of quality research and teaching.

In this context, the present section attempts to deliberate three questions. First, why did the academic score system fail to improve the research outcomes? Second, is such an academic score like a threshold, an appropriate method to evaluate teaching and research activities? Third, what can be done about it? The following three subsections (3.1 to 3.3) attempt to answer these three questions.

2.1 Academic score and its impact on research

Non-researchers often think that coming up with new ideas and theories does not require any serious effort. It is only after getting involved in serious scholarly inquiry for years that a person realizes how much time and effort is required to come up with a novel idea. Verifying the ideas based on empirical facts or proving it with deductive logic is a process that takes time and effort.

Many stories associated with great discoveries reinforce a simplistic understanding of the research process. For instance, it is commonly said that Isaac Newton was a great scientist for observing the falling apple and coming up with the idea that physical objects must be pulling each other due to gravitational force. This story does not mention the real effort that goes into the formulation of the idea, developing it based on previous understanding and verifying it based on lengthy empirical observation and experimentation.

This simplistic understanding is even apparent in the conversations of many highly learned folks. Once a journalist asked A. Michael Spence, recipient of Nobel Memorial Prize in Economic Sciences, if it is true that one can be awarded Nobel Prize in Economics just for observing that in the market some people have information that others do not (Spence, 2001). This question shows the lack of understanding that people have about research. A. Michael Spence and others were not awarded a Nobel prize just for this observation. They got the prize because they could develop a theoretical understanding of this phenomenon, which made it possible to understand its implication in different markets.

The majority of the research outcomes are not revolutionary like the above-mentioned examples. They only make a small addition to our understanding of the subject. These incremental additions in our understanding are neither less important

nor require less effort. On the contrary, most of the known big discoveries could not have been possible without these incremental additions.

The pressure of publishing minimum number of papers in specified period of time may be proven counterproductive. Although the researchers understand the effort needed for genuine research, the point they sometimes overlook is that the efforts and time needed are not the same in each and every case. A research project may take from a few months to a few years for completion. This time depends on factors like the nature of the topic, the expertise level of the researcher and their existing understanding of the topic. For example, the time required may be less if the researcher is working on similar topics for some time. On the other hand, a researcher interested in a new area or interdisciplinary topic may require much more time for completion of the research project. Sometimes, the collection of data may take a longer time than proposed. The availability of infrastructure is also an important determinant of the time required. Therefore, defining a number of expected publications and average assumed time taken to complete a research project may be misleading (Babu & Singh, 1998; Broström, 2019).

Research is an intrinsic self-driven natural characteristic of humans to pursue the questions that intrigue the human minds. The fallouts of such a phenomenon are written down and organized into a published research article in research journals primarily to share the new findings with a larger group of workers in the field and also to provide a feeling of self-satisfaction and accomplishment to the author for contributing to the advancement of knowledge. Therefore, the best way to understand the contribution of a researcher is unbiased and rigorous peer review.

Experience, however, shows that the peer review may not be free from errors. This makes it extremely difficult to come up with a measure that can accurately assess the contribution of a researcher. In this situation, one can only depend on the peer acceptance of the research while keeping in mind the possibility of errors that might have happened during evaluation. This possibility of errors does not mean acceptance of all ideas as true. It only means the acceptance of any idea as genuine research, as long as it is coherently made. The arguments without any logical connection and devoid of facts must be avoided for the development of any subject.

In the light of the above discussion, we may analyze the reasons for the failure of the academic score system to promote quality research. One tries to get an academic score from other activities like participation in conferences, talks, general

articles, refresher and orientation courses, membership in associations, national cadet core, national social service, sports and cultural activities, giving general talks, writing newspaper articles, organizing music or sports activities, performing administrative duties and attending seminars as prescribed by UGC regulation 2010 & 2018, which need less time and effort rather than focusing on good quality research. The importance given to these activities may be understood through its comparison with points obtained from high impact research work.

These activities may be important for some specific educational institutions. However, the inclusion of these activities is only justified if teachers and researchers were not performing them before framing these rules. Even if a few institutions faced difficulties, the participation in these activities could have been ensured by allowing institutions to engage teachers in such activities for certain hours each year. The points for such activities have only increased the tendency to either overdo them or engage in fake and wasteful activities. We can easily find seminars organized without any clear purpose with very poor quality of discussion. One can even get a certificate of participation or presentation without presenting any paper.

The inclusion of these activities has not only led to the wasting of time and resources, but it has also created a culture where only documenting the record matters. In any government job, the first (and perhaps the most useful) advice that the new employees get from their old colleagues is that their promotion depends not on working sincerely but on keeping the records. Maintaining record or proof of work is not a problem if it serves some purpose. However, it leads to wastage when a person is asked to maintain a record of the activities which are not their primary job.

The problem with the academic score is that it attempts to cover too many activities with little possibility of separating fake research from the real one. Comprehensive coverage of all aspects may be important for creating a merit list, which aims at the ranking of the candidates. However, the aim of academic scores is to create eligibility criteria to ensure that the candidates possess the minimum skills required to perform a job. The inclusion of a large number of activities often increases the cost of scrutiny and the possibility of error. An evaluation criterion should not allow candidates to fake their skills. If it is easy to fake the skills, then evaluating the criteria wastes time and resources. In addition, this phenomenon is

academically unethical, and it may also set wrong standards for upcoming academics.

Acquiring academic scores from other activities instead of focusing on quality publications (the most basic aspect of the research) is detrimental to knowledge production and academic training. Serious research always involves the publication of peer-reviewed articles and books. The other research activities or outcomes, such as project grants, conferences, workshops, and e-learning material, are either a means to achieve this end or a mode of disseminating the knowledge. A serious researcher engages in these activities according to their requirement. For example, a researcher shall apply for a project grant because he/she wants to understand a phenomenon and requires funds for buying material for experiment or collecting data. He/she will present his/her work in conferences to get comments from other experts or disseminate his/her ideas. Similarly, a researcher shall attend workshops to improve his/her skill sets by hands-on training.

Therefore, one can judge the quality of a person's work from their publications.

Focusing on other aspects only leads to the wastage of the resources. For instance, separate points for project grants encourage researchers to take unnecessary project grants. In India, a large number of such funded projects on completion do not add to our understanding of the topic. The majority of them do not even lead to any quality publication. It is because these projects are carried out with the sole purpose of inflating academic scores. Similarly, these academic scores do not encourage researchers to engage in consultancy, filing patent applications and writing policy documents. The government or other bodies (in an ideal situation) engage researchers to write policy documents or for carrying out work consultancy, only if they have established their credentials in terms of research publications. There are many benefits in terms of reputation, remuneration, etc. for engaging in these types of works. In the case of patents, it is very difficult to ascertain their quality. One way to know the quality of a patent is its commercial success. In the absence of such a measure, it is only the peers of the researcher who can ascertain the quality of their patent in terms of its contribution. The resource wastage can also be observed in e-learning material. Many institutions and experts were already creating e-learning material. These experts and institutions have given great emphasis on the quality and accessibility of the content. For instance, good quality

e-learning material is provided through the National Programme on Technology Enhanced Learning (NPTEL) which is an initiative by seven Indian Institutes of Technology (IIT Bombay, Delhi, Guwahati, Kanpur, Kharagpur, Madras and Roorkee) and Indian Institute of Science (IISc) for creating course contents in engineering and science. However, the e-learning content created to get academic scores is often of low quality. In fact, the flood of low-quality e-learning material is making it difficult to find material created with genuine efforts.

Academic score scheme rules are discouraging committed researchers from engaging in serious and useful research by putting them at a disadvantageous position in comparison to their unscrupulous colleagues. They discourage them from working on new promising topics that take a longer time to finish. They also discourage researchers from improving their skills and are leading many potential good researchers towards dishonest means by changing their incentive structure.

Many of the young and the senior level members of academia, those who are in terrible need of enhancing their academic score points easily fall prey to such predation and at the end of the day having research publications of dubious distinction to their credit causes financial loss to them at the same time.

Another problem with the academic score scheme of the UGC is that a good number of articles produced do not add to our knowledge since they were devised only for the purpose of inflating the number of publications merely for acquiring the academic score. The need for such publications arises from the regulations like the academic score scheme which are required to climb up the career ladder. Even though these regulatory measures aim to improve the quality and to recognize the performance appraisal, interestingly, these deceptively well-implicated regulations do not fulfill their motto and become counterproductive because of the simple reason that their ways of operation have fixated primarily on quantity and the substance is largely ignored.

The differentiation for making scores between refereed and non-refereed journals further complicates the scenario. For instance, the API scheme (category-III) recommends an API score of 25 for a paper published in a refereed journal while a score of 10 for a non-refereed (other reputed) journal (GOI, 2016). Similarly, in the regulation 2018, the research/academic score scheme recommends 8/10 score to UGC listed journal for humanities and social sciences, while for science subjects the journals should be indexed in *Scopus* or *Web of Science*.

The current academic score system is also taking into consideration the impact factor (IF) of the UGC listed journals in which the article was accepted for publication. In spite of that, many teachers who want to make quick scores prefer to publish in non-refereed journals in the UGC list. The reason is that a faculty member can contribute one or two high impact publications, ensuring the quality of the work, resulting into a lower score while publishing 4-6 low impact UGC listed publications may yield a higher score, while bringing down the quality (Rawat & Meena, 2014; Seethapathy *et. al*, 2016; Al-Adawi *et. al*, 2016). As a result, the motivated researchers who concentrate on quality research are left behind in this “rat-race” for higher academic scores.

In addition, the existing evaluation system in the form of the academic score scheme is made for all HEI teachers. However, there is a need to differentiate between university and college teachers because:

- (a) The teaching requirements in universities and colleges are completely distinct.
- (b) The magnitude and nature of the workload of faculty members in universities and colleges are also not similar.

Furthermore, the research facilities existing in all the universities and colleges across the country are not similar. Even among the central universities, some of the old universities are well equipped with modern research facilities whereas the newly established ones are mostly at the initial phase of acquiring such facilities. There is a clear-cut existence of disparity in the existing research facilities *vis-à-vis* the existing evaluation system. If research facilities are different in different institutions, how can one use the same yardstick and expect the same output from all of them. The following quote may be most relevant in this case: “*Everybody is a genius. But, if you judge a fish by its ability to climb a tree, it will spend its whole life believing that it is stupid.*” – This quote could be traced to Amos E. Dolbear, who has published an article under the pseudonym Aesop Jr. (Aesop, 1899).

2.2 Academic score and its impact on teaching

Category I of API and table 1 of appendix II of the research/academic score is related to teaching, learning and evaluation. It is not clear why this section even exists. It is the educational institutions that assign teaching, learning, and evaluation related work, and a teacher cannot ask for more teaching or courses. For example, a

teacher cannot ask their institution to start a programme or offer a course. Similarly, it is the institution that should ensure that each teacher performs examination duties or evaluates answer scripts. As far as innovative teaching is concerned, there is no clear method for measuring it. Even UGC rules do not specify any criteria to measure innovativeness. The scores in this subcategory are based on hours devoted, which is a very poor indicator. There is no way to calculate how much time a teacher had to spend on updating the course content. The teacher should not be involved in administrative assignments, so that they may give their best in the fields of teaching and research. But the teachers are involved in such non-academic activities to inflate their academic scores.

These rules also require teachers to devote significant time to maintaining records as proof of various academic and administrative activities that do not help in improving teaching outcomes in any way. On the contrary, it only diverts the attention of the teachers away from teaching and research as well. Another problematic implication of these rules is that they are only relevant until a teacher is promoted to the highest level of academic hierarchy i.e. professor. A professor, being at the highest level of hierarchy, hardly ever tries for promotion to senior scale. This is the reason that professors are often interested in administrative positions only. One can easily find professors in our universities who have not taught a single course for years. It has been observed that many of the policy-making high powered committees have these academically non-performing professors as their members, because such decisive committees have the standard constitution to have all of their members to be professors only. Therefore, sometimes these committees make such decisions that cause the rest of the juniors to suffer by stunted academic growth. Therefore, we suggest that such high powered committees should have representation from faculty members of all academic levels.

2.3 Suggestions for improving the evaluation system

The previous discussion shows that the academic score system has failed due to its excessive emphasis on quantity and lack of a good method to check quality. Therefore, the new system should get rid of irrelevant or potentially harmful criteria and use a method which satisfactorily checks the quality of the work and is less prone to manipulations. To start with, the activities given in category II, along with

the activities included in subcategories III (C), III (E) & III (F) of category III of the UGC regulation 2010 and its equivalent in UGC regulation 2018 (GOI, 2016; GOI, 2018) will be discussed. These subcategories cover academic activities such as fellowships, awards, and invited lectures, etc., which in reality do not contribute to the domain of knowledge and remain prone to be faked by the candidates to increase their academic scores. The initiative of setting up criteria for consideration of publications in journals which are indexed in world-class indexing agencies like *Scopus* and *Web of Science* by the UGC is appreciable. However, the eligibility criteria for promotion should be relaxed for teachers in colleges, which do not have the necessary infrastructure for research. The issue that still remains is how to check the quality of someone's publications, especially when there is a possibility of fraudulent practices. Even this academic score system was introduced to solve the problem of fraudulent practices. However, it has only made the matter worse. The reason for this worsening situation is that various committees have failed to take into account that the aim of the academic score is to find an indicator which signals the quality of a researcher's work and is difficult to fake. This situation requires finding a solution to the problem of imperfect information (i.e. one party has less information than the other). In the presence of imperfect information, people adjust their strategies according to the UGC regulations, making it difficult to separate good researchers from the poor quality researchers.

Economists have long been studying the consequence of imperfect information (A. Michael Spence along with George A. Joseph E. Stiglitz received a Nobel Memorial Prize in 2001 for their work on this problem). When the employers do not know the quality of the candidates, they may end up selecting the less productive candidates. This problem is known as adverse selection. In the presence of imperfect information, employers often use various signals, such as the reputation of the institution, years of experience, etc., to identify more productive employees (Spence, 2001). In academics, the reputation of the journal in which the research has been published and citation of the work by peers is used as a signal of the quality of a researcher's work. However, it is necessary to evaluate the candidate's scholarly and scientific work, not the reputation of the journal where they have published their work. Evaluating only the reputation of the journal may lead to an inappropriate selection.

The private sector often does not require framing of elaborated rules about these signals for the selector to choose more productive candidates. It is because the private players have to endure a loss if they select inefficient candidates. However, such elaborate rules about the selection procedure are required if the selectors may have alternative motives. The selectors in government departments or public sector institutions do not bear any personal loss for selecting inefficient persons. In the absence of any personal loss, they often pursue alternative motives. The elaborate regulations are used to prevent selectors from acting on personal interest. Since these rules are never perfect, the selectors are often given limited freedom. Therefore, the selections often happen in two stages. In the first stage, the rules are used to screen a large number of good candidates. In the second stage, the selectors are given the job to select the best among them.

If the first round of scrutiny is efficient, the limited discretionary power of the selector may, in fact, improve the selection procedure. Even when there is some abuse of position in the second round, the efficient rules ensure a minimum quality of the candidates. However, the inefficient rules result in a selection of a large number of inefficient candidates in the first round. It increases the possibility of malpractice and a large number of low-quality candidates get selected. If we consider that the rules are framed to identify people based on certain signals, the inefficient rules are those which use signals that are easy to fake.

The signals which work efficiently in the private sector need not work for selections in the public sector. This is because many rules used in the private sector require subjective interpretation of these signals. If this subjective interpretation can be easily influenced, then the candidates can easily fake the signals. For instance, if the selectors have to decide the quality of research, they may consider poor quality as good. On the other hand, any attempt to make it more objective, may make the criteria too rigid. This is what has happened in the case of the academic score system.

The main reason for the failure of these systems is that they are not based on unbiased peer review. Publications in a quality journal go through rigorous blind peer review before getting accepted. The blind review ensures the integrity of the process. The citation of a paper by the peers is also unbiased as it only happens if they find the argument convincing. The problem with the academic score is that a large number of fake journals claim to follow blind review; they even used to write

three dates: received date, revised date and date of acceptance. The publishers of many such fake journals have managed to enter the 'white list' of the UGC and then they even show on their web-pages that it is a UGC listed journal. As such, publishers have used their influence through the recommending universities and entered the 'white list' of the UGC. At a later stage, since the UGC has constituted a journal screening committee, many of them have been removed from this 'white list'. These publishers also ensure that the publications in their journals are cited in other fake journals to increase their impact factor as well as citation of their authors. The private institutions may identify such fake journals using their subjective assessment. However, in public sector institutions, such subjective assessment only increases the possibility of manipulations.

In such a situation, the only way to check the quality of a researcher's work is their anonymous review. The existing rules of many Universities also require such a review. However, it is neither anonymous nor unbiased. Even worse, these reviews are often influenced by authorities of the HEI, who select these reviewers. These rules instead of improving the academic culture often result in researchers trying to please the authorities. Therefore, the anonymous review requires both the researcher and the HEI authorities to be kept out of the process.

Such an exercise can be easily done in the present age of internet technology. For example, UGC can make an online platform where teachers with good/required academic records from all fields may be asked to register. Then, the teacher applying for a promotion may be asked to upload their publications on that platform for anonymous review. The submitted work based on the field and sub-field of the researcher may be sent out to three reviewers. If at least two of the reviewers are satisfied with the work, the publication can be allowed to be used for promotion or direct recruitment. Such a platform of the UGC, called VIDWAN, exists in a place where experts can register themselves with their keywords representing their area of expertise, list of publications and affiliations. UGC may expand it further and could use it as database of expert evaluators.

UGC has a fixed number of published papers required for promotion from one stage to the next stage in its regulation 2018; for instance, seven publications are required to become associate professor and ten to be professor and at least three of them should be from the assessment periods of three years for both. As its aim is just to check the eligibility of a candidate, these papers may be evaluated for this purpose

using this anonymous online system. The service (anonymous review) may also be extended to people working in private institutions as a paid service. To reduce the load, the articles published in a small number of highly reputed journals may be considered for auto clearance. This system will be much simpler and the possibility of biasness will be minimal. The system can be extended to include patents, which can be evaluated in a similar manner. The patent holder can be asked to submit the detailed information on an anonymous review portal and it can be sent for anonymous review. If at least two of the expert reviewers are satisfied, the patent may be considered equal to a research paper. It is further suggested that there must be some scheme of incentivization by UGC for the researchers in order to motivate them for doing good quality research on the basis of their research output. For example, in recent past the Chinese government has incentivized its researchers for publishing high impact research works, which has already started yielding some good results (Quan *et al.*, 2017).

It must be noted that the above suggestions are just to decide the eligibility of the candidate for first round screening. In the second round, the interview by subject experts may be used for selection and promotion. To ensure that the second round also remains unbiased, the Universities may be asked to use the UGC portal to randomly generate a list of subject experts for conducting the interview. To ensure some flexibility, UGC may provide a list of ten experts for the requirement of three. The HEI may call the required number of experts from this list. For direct recruitment, some points may be given for publication based on the impact factor of the journals or citation of the work by peers at the second stage. The experts may also be asked to give points for teaching skills. The weightage of interview marks should be the least possible. The recording of the interview meeting should be made mandatory to avoid any possible biasness in the process.

As far as teaching and learning are concerned, it can be replaced with some simple rules. The responsibility of distributing workload can be given to the institution. Since there is no way to ensure that workload will always be equivalent to the UGC prescribed hours, the institution may be asked to make sure that the workload does not come below a required number (say 50% of the prescribed working hours). Also, the institutions may engage teachers in examination and evaluation duties as per the requirement. The institution may be instructed to ensure that each teacher shares an equal workload.

In addition, the institutions may be given the freedom to engage a teacher in non-teaching activities for a given number of hours (say two hours each week or 100 hours a year). If keeping a record is really necessary, the institutions may be asked to maintain an annual record of each teacher in a prescribed format. These rules will make the promotion process simpler and save a lot of time for teachers. The teacher will also be able to concentrate on their teaching rather than calculating the hours devoted to each of these activities and maintaining their record. This will help them give more time to students.

Conclusions

The article makes three main arguments. First, the time and resources required for each topic of research are different. There is no perfect indicator to determine the contribution of a person. However, a good researcher produces good research, no matter the nature of the work. This quality of research can be determined only through discipline-specific peer review. Second, e-learning materials are not good indicators of a high level academic outcome. Third, the minimum academic score being eligibility criteria must focus on selecting good quality HEI teachers based on peer-reviewed publications and teaching/communicating skills.

Based on the discussion, it is suggested that UGC should get rid of category I and category II (GOI, 2016) and the equivalents in table-1 and table-2 of appendix-II in the UGC regulation 2018 (GOI, 2018). Since almost all researchers publish research articles and books, the quality of their work can be ascertained from these articles and books at the first stage. To evaluate the research outcome, UGC may create a system of anonymous review of a minimum number of best papers submitted by the candidate. Both the HEI and the researcher must be kept out of the review process to ensure an unbiased evaluation. UGC may use modern day information technology to create such a system. Good researchers must be given some incentives to perform and publish research, which makes incremental advances in the subject area as judged by the peers in the field. In the second stage, interview by subject experts may be used for promotion or selection in the Indian HEIs, however, the weightage of the interview should be kept not more than ten percent to remove any possible biasness in the process.

#Notes

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REFERENCES

- Al-Adawi, S., Ali, B. H., & Al-Zakwani I. (2016). Research Misconduct: The Peril of Publish or Perish. *Oman medical journal*, 31(1), 5–11. doi:10.5001/omj.2016.02
- Aesop, Jr. (1899). An educational allegory. *Journal of Education*. 50, 235.
- Babu, R. A., & Singh, Y. (1998). Determinants of research productivity. *Scientometrics*, 43(3), 309-329.
- Broström, A. (2019). Academic breeding grounds: Home department conditions and early career performance of academic researchers. *Research Policy*, 48(7), 1647-1665.
- Das, D. N., & Chattopadhyay, S. (2014). Academic performance indicators: straitjacketing higher education. *Economic and Political Weekly*, 49(50), 68-71.
- Government of India. (2010). UGC Regulations on Minimum Qualifications for Appointment of Teachers and Other Academic Staff in Universities and Colleges and Measures for the Maintenance of Standards in Higher Education 2010, UGC 30 June. *The Gazette of India*, 18 September (Part III, Section 4), Government of India.
- Government of India. (2011). UGC (Minimum Qualifications for Appointment of Teachers and Other Academic Staff in Universities and Colleges and Measures for the Maintenance of Standards in Higher Education) (1st Amendment), Regulations 2011. *The Gazette of India*, 16 March (Part III, Section 4), Government of India.
- Government of India. (2013). UGC (Minimum Qualifications for Appointment of Teachers and Other Academic Staff in Universities and Colleges and Measures for the Maintenance of Standards in Higher Education) (2nd Amendment),

- Regulations 2013. *The Gazette of India*, 13 June (Part III, Section 4), Government of India.
- Government of India. (2016). UGC (Minimum Qualifications for Appointment of Teachers and Other Academic Staff in Universities and Colleges and Measures for the Maintenance of Standards in Higher Education) (3rd and 4th Amendment), Regulations 2013. *The Gazette of India*, 4 May & 11 July (Part III, Section 4), Government of India.
- Government of India. (2018). UGC (Minimum Qualifications for Appointment of Teachers and Other Academic Staff in Universities and Colleges and Measures for the Maintenance of Standards in Higher Education) Regulations 2018. *The Gazette of India*, 18 July (Part III, Section 4), Government of India.
- Hasan, Z. (2015). No acche din for higher education. *The Hindu*. <http://www.thehindu.com/opinion/lead/no-acche-din-for-higher-education/article7224444.ece>.
- Karlsson, E. (2017). What Happened to Jeffrey Beall's List of (Allegedly) Predatory Publishers'? *Debunking Denialism*. <https://debunkingdenialism.com/2017/01/16/what-happened-to-jeffrey-bealls-list-of-allegedly-predatory-publishers/>.
- Lakhotia, S. C. (2015). Predatory journals and academic pollution. *Current Science*, 108, 8-25.
- Perry, S. (2015). Plagiarism, fraud, and predatory publishing' are polluting science, says bioethicist Arthur Caplan. Second Opinion. *MINNPOST*. <https://www.minnpost.com/second-opinion/2015/04/plagiarism-fraud-and-predatory-publishing-are-polluting-science-says-bioethic>.
- Rawat, S., & Meena, S. (2014). Publish or perish: Where are we heading? *Journal of research in medical sciences: the official journal of Isfahan University of Medical Sciences*, 19(2), 87.
- Seethapathy, G. S., Kumar J. S., & Hareesha, A. S. (2016). India's scientific publication in predatory journals: need for regulating quality of Indian science and education. *Current Science*, 1759-1764.
- Spence, A. M. (2001). Signaling in Retrospect and the Informational Structure of Markets. *Nobel Prize Lecture*. http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/2001/spence-lecture.html.

Quan, W., Chen, B., & Shu, F. (2017). Publish or impoverish: An investigation of the monetary reward system of science in China (1999-2016). *Aslib Journal of Information Management*, 69(5), 486-502.