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Higher education in India: A critique of monitoring and evaluation

RESEARCH ARTICLE

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SIMRAN KANG SIDHU^{1*}, SHALINI SHARMA², SARITA SAINI³ AND SUMEET GREWAL⁴

1&2 Professor, Associate Professor and Assistant Professor
 1&2 Department of Economics and Sociology, Punjab Agricultural University

 Ludhiana (Punjab) India

 ³ Department of Human Development and Family Studies, Punjab Agricultural University

 Ludhiana (Punjab) India

 ⁴ Department of Apparel and Textile Science, Punjab Agricultural University

 Ludhiana (Punjab) India

ABSTRACT

Overall expansion of Indian higher education in terms of number of colleges and universities over the period two decades has been appreciable and the student enrolment in these institutions is growing at 5 percent annually over this period. Though today, we have millions of highly educated graduates but the ones who are equipped with problem solving and creative skills and ability to think critically are scarce in number. Major concerns of education in India are low faculty strengths, inadequate handson skills, lack of research experience and shortage of funds along with a serious problem of inbreeding. According to NAAC, 90 per cent Indian Universities and 70 per cent colleges are of mediocre or poor quality (Aggarwal, 2009; Nandi and Chattopadhyay, 2012). Present study was conducted with the objective of reviewing critically the monitoring and evaluation indicators for higher educational institutions being used nationwide and to find out lacunae if any. For this purpose four National Autonomous Councils/Boards for Higher Education were purposively selected. The critical analysis of these available national tools paved the way for the formulation of a much-needed exclusive tool for monitoring and evaluation of higher education at departmental level in Indian Universities. As per the finding of the study the new tool must focus on the indicators like quality and strength of the post graduate faculty, their work load, incentives offered, opportunities for up gradation of their skills In addition certain student oriented quality indicators can also be incorporated like the provision of outside state/country student admission policies, students 'publications, their participation in conferences/ seminars/ workshops and co-curricular activities, and awards for their distinguished achievements. Thus, by taking into account all the relevant criteria as suggested by the already existing tools as well as judiciously blending the other significant teacher/students oriented quality indicators to put forth a more balanced and practical measure for the monitoring and evaluation of post-graduate education is a need of the hour.

Key Words: Constraints, Improved production technology, Socio-economic profile, Suggestions

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INTRODUCTION

The changing economic scenario throughout the world has made several developing countries including India to give utmost importance to education in general and higher education in particular. At present, India has about 304 Universities, including 62 Deemed Universities, 11 open Universities, and 15,000 colleges, incorporating approximately 10 million students and 0.5 million teachers. It is this feature that labels it with the second largest higher education system in the world. The overall expansion over the period of time has been appreciable, even student enrolment growing at 5 percent annually over the past two decades. In spite of all this increase in enrolment, only about 10-11 per cent of the population in the relevant age-group (17-23 years) is enrolled in higher education, and a mere 5 per cent graduate with degrees (Verma, 2016).

The present system of higher education does not serve the purpose for what it was meant for. It is ironic to note that inspite of millions of highly educated graduates, there is dearth of ones who are equipped with problem solving and creative skills and ability to think critically. Apart from the technical and generic skills, generally our graduates/post graduates lack leadership and entrepreneurial skills to build leading teams, and put innovations into practice and respond to competitive environments. In general, education itself has become so profitable a business that quality is lost in the increase of quantity of professional institutions with quota system and politicization adding fuel to the fire of spoil system, thereby increasing unemployment of graduates without quick relief to mitigate their sufferings in the job market of the country (Soni and Patel, 2014; Modi, 2014). The clearest and boldest statement of this issue can be found in the "Report to the Nation 2006" of the National Knowledge Commission which concluded that there is 'a quiet crisis in higher education in India that runs deep', and that it has to do with quality rather than quantity.

Major concerns of education in India are low faculty strengths, inadequate hands-on skills, lack of research experience and shortage of funds along with a serious problem of inbreeding (Kumar et al., 2014, Varma, 2014). In the due course of time the above mentioned constraints impacted the quality of education too badly that major employers do not find the product i.e. graduates and postgraduates of many public universities employable. They have expressed their concern spending huge sum on making them employable (Ghuman, 2012; Singh, 2011). As a result, a large majority of the passed out students got added to already swollen brigade of unemployed every year and compelling many of them to review and others to repent their decision of opting higher education after schooling over employment at the first place. As the Indian economy strives to grow at 9 per cent plus GDP, the higher education sector of India has to respond with dynamic changes to meet the escalating shortage of skilled and educated manpower. Students who want to be 'industryready' are also demanding world class education in conventional as well as non-conventional streams of education. However, the performance of higher education institutions is a growing concern. The pressure for quality assurance poses a major challenge for higher education in India. Available literature on quality of higher education in India have dealt with issues ranging from professional examination results to internal aspects of inputs i.e. accreditation, students intake, basic infrastructure, qualifications of teaching faculty etc. (Velaskar, 2010; Avhad, 2013; Chahal, 2015).

No doubt that the efforts of regulating agencies have been intensified quality assurance to some extent but still the overall scenario in India does not match with the global quality standards. Poor quality is often exemplified by the fact that no Indian university figured in the top -100 list of popular global university rankings. Even in the national context, according to NAAC, 90 per cent Indian universities and 70 per cent colleges are of mediocre or poor quality (Aggarwal, 2009; Nandi

and Chattopadhyay, 2012). Various studies have indicated low degree of employability of Indian graduates, which is matter of serious concern both for the planners as well as the industry. Against this backdrop, present study was conducted with the objective of reviewing critically the monitoring and evaluation indicators for higher educational institutions being used nationwide and to find out lacunae if any. For this purpose four National Autonomous Councils/Boards for Higher Education were purposively selected.

Accreditation or ranking tools used by these Councils/Boards for the assessment of education in higher educational institutions were precured from their respective website/office. Comparative analysis of the indicators mentioned in each monitoring and evaluation tool was done by using simple percentages. Discussion on the four selected monitoring and evaluation tools is as under:

Selec	Selected National Autonomous Councils/Boards governed by their respective apex bodies			
Sr. No.	National Council/Board	Apex Bodies		
1.	NAAC	UGC		
	(National Assessment and Accreditation Council)	(University Grant Commission)		
2.	NBA	AICTE		
	(National Board of Accreditation)	(All India Council for Technical Education)		
3.	NAEAB:	ICAR		
	(National Agricultural Education Accreditation Board)	(Indian Council of Agricultural Research)		
4.	NIRF	MHR		
	(National Institutional Ranking Framework)	(Ministry of Human Resource Development)		

NAAC: National Assessment and Accreditation Council (UGC)

National Assessment and Accreditation Council Tool, developed in 1994 to assess the quality of higher education in India, is meant for all the educational programmes which are governed by the UGC norms and guidelines. The tool vividly explains the detailed guidelines and good practices for its identified seven criteria. The sub-components/key aspects for the above mentioned seven criteria have been assigned appropriate weightage, presented in Table 1. Based on 1000 point basis, the maximum weightage of 250 points has been assigned to research, consultancy and extension followed by 200 points for teaching, learning and evaluation and 150 points for curriculum related aspects.

It implies that 60 per cent weightage is attributed to the aforementioned three criteria. As regards the remaining four criteria namely, 'infrastructure and learning resources', 'student support and progression', 'governance, leadership and management' as well as 'innovations and best practices' has been assigned an equal weightage of 100 points. In other words, these four criteria account for only 40 per cent of the weightage under the assessment tool approved by NAAC.

This assessment system is mainly designed for quality assessment of Science and Humanities based educational programs. Thus, the NAAC comprises a comprehensive and objective based criterion for the accreditation and assessment of higher education programs/institutions in India in the specified streams. However, its major focus is on whether or not an institution/program meets the criteria laid down in the table. It may be worthwhile to mention here that its maximum focus and weightage is for 'research, consultancy and extension', which appears to be in order for evaluation of post-graduate education programs across other streams as well. Notwithstanding the strengths and attributes of the comprehensive criteria laid down under NAAC, for assessing the quality of post-graduate education programs, the format as such would not full fill the desired objective of

Criteria	Key Aspects	Weightage
Curricular Aspects	Curriculum Design and Development	50
•	Academic Flexibility	50
	Curriculum Enrichment	30
	Feedback System	20
	Total	150
Teaching, Learning	Student Enrolment and Profile	10
and Evaluation	Catering to Students Diversity	20
	Teaching- Learning Process	50
	Teacher Quality	50
	Evaluation Process and Reforms	40
	Students Performance and Learning Outcomes	30
	Total	200
Research,	Promotion of Research	20
Consultancy	Resource Mobilization for research	20
and Extension	Research Facilities	30
	Research Publications and Awards	100
	Consultancy	20
	Extension Activities and institutional Social Responsibility	40
	Collaborations	20
	Total	250
Infrastructure	Physical Facilities	30
and Learning	Library as a Learning Resource	20
Resources	IT Infrastructure	30
	Maintenance of Campus Facilities	20
	Total	100
Student Support	Student Mentoring and Support	40
and Progression	Students Progression	40
	Student Participation and Activities	20
	Total	100
Governance,	Institutional Vision and Leadership	10
Leadership and	Strategy Development and Deployment	10
Management	Faculty Empowerment Strategies	30
	Financial Management and Resource Mobilization	20
	Internal Quality System	30
	Total	100
Innovations and	Environment Consciousness	30
best practices	Innovations	30
-	Best Practices	40
	Total	100
	Grand Total	1000

monitoring and evaluation of post-graduate education at the grass root/department level in the institutions of higher education.

NBA: National Board of Accreditation (AICTE):

The second accreditation tool under consideration was by the National Board of Accreditation

Criteria	Key Aspects	Weightage
Vision, Mission and	Vision and Mission	05
Program Educational	Program Evaluation Objectives	10
Objectives (PEO)	Achievements of PEOs	20
	Assessment of Achievements of PEO	35
	Indicate how the PEOs are used for redefining past PEOs	05
	Total	75
Program Outcomes	Definition and Validation of Program Outcomes	20
	Attainment of Program Outcomes	75
	Evaluation of Attainment of Program Outcomes	125
	Use of Evaluation Results towards Improvement of Program	30
	Total	250
Program Curriculum	Curriculum	15
	Interaction with Industry/R&D Organization	40
	Curriculum Development	15
	Course Syllabi	05
	Total	75
Students' Performance	Admission intake in the Program	15
	Success Rate	20
	Academic Performance	20
	Placement in Higher Studies	20
	Professional Activities	25
	Total	100
Faculty Contributions	Student Teacher Ratio	20
•	Faculty strength in PG Program	20
	Faculty Qualifications	30
	Faculty Competencies to program curriculum	15
	Faculty participation in Faculty Development/Training Activities	15
	Faculty Retention	15
	Faculty Research Publications	30
	Faculty Intellectual Property Rights	10
	Funded R&D and Consultancy Work	30
	Faculty Interaction with Outside World	15
	Total	200
Facilities and Technical	Classrooms in the department	15
Support	Faculty rooms in the department	15
Support	Laboratories in the Department	30
	Technical Manpower support in the Department	15
	Total	75
Teaching –Learning	Evaluation : Course Work	25
Process	Z. M. MILON I. COMING II OIR	23
1 100033	Evaluation: Project Work/Thesis	25
	Teaching Evaluation and Feedback System	10
	Self Learning and Outreach Activities	15
	Total	7 5

Table 2 contd....

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Governance,	Campus Infrastructure and Facility	05
Institutional Support	Organization, Governance & Transparency	10
and Financial Resources	Program Specific Budget Allocation, Utilization	10
	Library Space, Timings, Staff, Books and Journals, Online Access	20
	and Networking	
	Incubation Facility	05
	Internet	05
	Safety Norms and Checks	05
	Counselling and Emergency Medical Care	05
	Total	75
Continuous	Improvement in Success Index of Students	05
Improvements	Improvement in Academic Performance Index of Students	05
	Improvement in Student Teacher Ratio	05
	Enhancement of Faculty Qualification Index	05
	Improvement in Faculty Research Publications and Consultancy	10
	Continuing Education	10
	New Facility Created	15
	Overall Improvement since last accreditation/establishment	20
	Total	75
Grand Total		1000

(NBA) that has been established for the Engineering and Technical Educational Institutes which come under the purview of AICTE. This tool has been developed by considering disciplines namely, Engineering and Technology, Management, Architecture, Pharmacy and Hospitality etc. In this context this tool has a particular aim and focus specifically on the quality assurance need of the above mentioned fields of technical education The NBA tool comprised a nine point comprehensive criteria and guidelines as presented in the Table 3.

A perusal of Table 3 shows different indicators under the nine point criteria included in the NBA guidelines. Maximum weightage of 250 points has been assigned to 'Program Outcomes' followed by 200 points weightage to 'Faculty Contributions' and a weightage of 100 points for 'Students Performance'. As regards the other six criteria, an equal weightage of 75 points (7.5%) has been assigned in each case.

It can, therefore, be seen that equal weightage has been assigned to the 'vision, mission and program educational objectives', 'program curriculum', 'facilities and technical support', 'teaching learning process', 'continuous improvements' as well as 'governance, institutional support and financial resources'.

Suffice it to say, that both the NAAC and NBA tools and their respective criterion capture the core aspects of assessment of the educational programs irrespective of nominal variations in the weightage assigned to the different criteria included in these tools. It is thus noteworthy that core aspects for most of the science and humanity based programs have the same ingredients and elements in their composition and structure. Call them by any name but both these tools are essentially for accreditation of existing programs across different streams of education namely science based, humanities based, technical institutions, engineering, architecture etc. The monitoring and evaluation of post-graduate education in the institutions of higher education is likely to get diffused, if only the

accreditation tools have to be employed for the purpose of evaluation of post-graduate education at grass root (department level). It has been observed that these parameters project the macro level scenario and that too at the institution level. The department level peculiarities or inadequacies rarely get reflected or mentioned at broader level and many times remains neglected. These need to be addressed in order to correct the anomalies and plug the loopholes at the base level. Only then a larger holistic approach responsive to the needs of individual departments can be formulated.

NAEAB: National Agricultural Education Accreditation Board; Indian Council of Agricultural Research (ICAR)

The ICAR established the Accreditation Board in 1996 by replacing the Norms and Accreditation Committee that was set up in 1974. The accreditation board of ICAR, presently nomenclature as the National Agricultural Education Accreditation Board (NAEAB) monitors and evaluates the educational programs pertaining to agricultural education in different State Agricultural Universities (SAUs) and other institutions dealing with agriculture and allied sciences. The approved criterion of accreditation consists of six major components. An overview of the criteria presented in Table 3.3 depicts that a maximum weightage of 250 points has been assigned to 'faculty and staff strength, development and performance' followed by a weightage of 200 points for 'infrastructure and learning resources'.

Out of the remaining four criterion, 'student support and progression', 'course regulation and curricula' and 'performance review, output and outcome' have been assigned an equal weightage of 150 points each. The remaining 100 points weightage out of a total of 1000 points is assigned to 'governance and financial management'. Thus, it is noteworthy to mention that the maximum weightage of 45 percent is devoted to the two criteria of 'faculty and staff strength, development and progression' as well as 'infrastructure and learning resources'. An equal weightage of 15 per cent each is assigned to the three criteria of 'student support and progression', 'course regulation and curricula' and 'performance review, output and outcome'. The 'governance and financial management' component has been assigned just 10 per cent weightage.

The NAEAB is equipped with the tool carry out an inspection and audit of institutions and universities as per the laid down criteria in the M&E tool. If an institution satisfies the minimum criteria laid down than it gets the accreditation status. Different key aspects evaluated under six major criteria could undoubtedly do justice for judging the quality of education and research at institutional level. In order to abreast with the latest developments in the sphere of agriculture and allied fields, the process of audit and accreditation is repeated usually after five years after doing required changes in the M&E tool. Study found that same goes for the assessment for the quality of post graduate education and research.

It would have been better if the regulating agencies' M&E tools could reflect the quality of education and research at departmental level. The existing tools of UGC, AICTE, ICAR though are indicative of quality standards but only at institution level. The department level performances rarely get reflected through these tools. Therefore, in order to address the issue of inequitable distribution of resources and services at departmental level, the existing tools could be reformulated in that light.

NIRF: National Institutional Ranking Framework (MHRD):

National Institutional Ranking Framework (NIRF) developed by Ministry of Human Resource and Development (MHRD) in the year 2014 is another assessment criteria developed to ensure the

	of Quality Impact Factors Considered by NAEAB (National Agron Board), ICAR	ricultural Education
Criteria	Key Aspects	Weightage
Infrastructure and	Modern Class and Seminar Rooms, ICT Based	45
Learning Resources	Instruction Farms/Units	25
	Laboratories	35
	Library	25
	Experiential Learning Units	25
	Student Amenities	30
	Facilities for Physically Challenged Persons	15
	Total	200
Faculty and Staff	Faculty Recruitment	40
Strength,	Faculty Strength	60
Development	Faculty Credentials	40
and Performance	Generation of Knowledge	35
	HRD Policies and Programmes	30
	Awards and Recognitions	20
	Faculty Evaluation	25
	Total	250
Student Support and	Admission Process	25
Progression	Student Teacher Ratio	20
	Student Counselling	20
	Placement Services and Record	25
	National/State Level Awards	20
	Student Discipline	20
	Student Pass-out Ratio	10
	Students' Participation in Seminars / Symposium / Conference	05
	for PG and Tours for UG Students	03
	Students' Participation in Extra-curricular Activities	05
	Total	150
Governance and	Adherence to ICAR Model Act	10
Financial	Policy Planning, Implementation, and Monitoring Mechanism	15
Management	Functioning of Statutory Committees	15
Wanagement	Grievances and their Readdressal	10
	Devolution of Powers	10
	Welfare and Incentive Mechanisms	10
	Funds Management and Procurement System	20
	External Funding and Resource Generation	05
	E-Governance	05
	Total	100
Course Regulation	Course Curricula Relevance and Updation	30
and Curricula	Implementation of ICAR Curricula Recommendations	25
and Curricula	Curriculum Delivery System	30
	Academic Regulations	35
	Evaluation System of Students	30
	Total	
Performance Review,	Performance of Schemes: Education, Research, Extension	150 40
Output and Outcome	Schemes	
	Output: Students Graduated, Varieties, Technologies, Products, Patent, Papers, Consultancy	40
	Networking and Collaboration	30
	Outcome and Impact on Agricultural development	40
	Total	150
	Grand total	1000

participation of larger number of Indian institutions in the global rankings. The ranking system is basically meant for Engineering, Management, Pharmacy, and Architecture and also for Colleges and Universities.

This major emphasis of the tool (70%) is on evaluation of the two major criteria that are focused on the key aspects of 'teaching, learning and resources (30%)' and 'research productivity, impact and IPR (40%)' (Table 5). The rest, 30 per cent weightage, is assigned to 'outreach and inclusivity (15%)', 'perception (10%)' and 'graduation outcome (5%)'. This tool is, no doubt, a significant step in the direction of providing an impetus to the Indian universities to seek collaboration with similar institutes in overseas countries and also to enable prompt acceptance of Indian faculty and students for higher education in such institutions. This tool serves as a benchmark for Indian education institutions to strive for parity in their standards with international institutions. However, this tool is not well equipped with a design to evaluate the quality of post-graduate education that too at the department level.

Table 4 elucidates the key factors mentioned in all the national assessment and ranking tools. The overview of the table reveals that the 'research outcomes', 'quality and strength of faculty' and 'teaching—learning environment' emerge as the most impacting factors in the accreditation and ranking criteria. The other contributing factors have been given nominal weightage and thus may be understood as the catalyst to enhance the quality of education across all streams of education within and outside India.

Criteria	Key Aspects	Weightage
Teaching	Teacher student Ratio with emphasis on Permanent Faculty	25
Learning and	Faculty with Ph.D. and Experience	25
Resources	Library and Laboratory Facilities	40
	Sports and Extra Curricular Facilities	10
	Total	100 (W=0.30)
Research	Publications	45
Productivity,	Citations	45
Impact Factor and	Intellectual Property Right	10
IPR	Total	100 (W=0.40)
Graduation	Performance in University Examinations	50
Outcome	Performance in Competitive Examinations	50
	Total	100 (W=0.05)
Outreach and	Outreach Footprint (Continuing Education, Services)	25
Inclusivity	Percentage of students from other States / Countries	25
	Percentage of Woman Students and Faculty	20
	Percentage of Economically and Socially Disadvantaged Students	20
	Facilities for Differently abled Persons	10
	Total	100 (W=0.15)
Perception	Process for Peer Rating in Category	50
	Application to Seat Ratio	50
	Total	100 (W=0.10)
	Grand Total	500 (W=100)

Critique on National Tools:

Critical evaluation of M&E tools used by Higher Education Institutions in India establishes two facts. One that accreditation and ranking tools though are critical and efficient in ensuring equality of higher education, but overwhelming reliance on rigid and quantitative determinants will promote corporate type of management in education, which could threaten the inclusive role of higher education. Secondly, it is deduced that though the available M&E tools claim to shoulder the responsibility of quality assurance but at best they assure quantitative parameters by an institution and thus ignoring the very basic objective of higher education *i.e.* transforming individuals into responsible human beings by inculcating and nurturing social, moral and ethical values in them. Further, accreditation and ranking tools discussed above were too universal and having macro parameters for assessment which surely undermined the importance of regional variations. Homogenous variables could best evaluate the quality of the institutions concerned but did not seem capable of capturing inter institutional and intra-institutional intricacies. The study came out with the fact that greater emphasis on teaching component has the capacity to perform that function.

Table 5: Comparative Picture of Weightage of Impact factors for different National Level Tools			
National Ranking Tools		Key Factors Weightage	Cumulative Weightage
NAAC	•	Research, consultancy and extension (25%)	65%
	•	Teaching, learning and evaluation (20%)	
	•	Curricular aspects – (15%)	
NBA	•	Program outcomes (25%)	55%
	•	Faculty contributions (20%)	
	•	Students' performance (10%)	
NAEAB	•	Faculty and staff strength, development and performance (25%)	60%
	•	Infrastructure and learning resources (20%)	
	•	Student support and progression (15%)	
NIRF	•	Research productivity, impact and IPR (40%)	70%
	•	Teaching learning and resources (30%)	

From the perusal of the detailed criteria and the weightage assigned to the different components of the tools currently in use at national level, there is a general consensus among academia that almost of all the relevant aspects needed for assessment, ranking and accreditation criteria may be included. There is no denying of the usefulness of these tools to inculcate and promote a sense of competition among different accredited institutions and persuade them to strive for making up for the deficiencies, if any, to meet the benchmarks set up under these tools. However, at the same time an effective system for assessing the quality of higher educational institutions would need to distinguish between recognition, accreditation and evaluation of the institution under review. Recognition is a minimal, legal threshold which essentially ensures that the institution offers courses and degrees which fall within the purview of the recognized higher education system. Accreditation is a higher threshold of minimal quality assurance, it validates and provides assurance that the quality of education provided by the institution meets a common standard. It reassures recruiters that the student has received quality education and will add value to the establishment when he/she joins it. But accreditation is voluntary and the institutions have to approach the accreditation agencies to get their institution or programme accredited. But most importantly, the issue of regularized system of evaluation in institutions is still to be addressed. Development of NIRF by Ministry of Human Resource and Development (MHRD) is a good initiative to ensure the participation of larger number of Indian institutions in the global rankings but again it is voluntary in nature. For instance, the results of NIRF Rankings-2017 showed that only six agricultural universities out of 63 participated in it which already stood at a better place amongst the agricultural universities.

Above all, education at post-graduation level needs to be addressed specifically. A major concern expressed by educational planners and stakeholders is that the products of the institutes of higher education particularly in respect of post-graduate education are far from satisfactory in most cases. Hence, there is a need to develop an exclusive tool which focuses on all aspects of post-graduate programs in different specializations to address to the crucial factors at the grass root level. It shall give a much needed quantum jump in attaining global compatibility in Indian post-graduate education and research. Furthermore, it will bolster the quality competence and research productivity of the post graduate teachers and students. It is highly essential to serve the needs and expectations of stakeholders as well. It would also motivate the post-graduate students given hands on training and experience in the institutions with quality education, to initiate their own business ventures and enterprises, which presently are not up to the desired level.

Conclusion:

The critical analysis of all these available national and international tools, thus, paves the way for the formulation of a much-needed exclusive tool for monitoring and evaluation of higher education at departmental level in Indian Universities. Unlike the accreditation or ranking tools, this tool must take into account the individual perceptions of the administrators and the teachers involved in the post-graduate teaching-learning at the departmental level. As understood from the foregoing critical analysis of the accreditation/ranking tools the new tool must focus on the indicators like quality and strength of the post graduate faculty, their work load, incentives offered, opportunities for up gradation of their skills etc. The due importance should be accorded to quality indicators focusing on research outcomes as well as the teaching-learning environment including the infrastructure. In addition to these most acknowledged quality teaching indicators, certain student oriented quality indicators can also be incorporated like the provision of outside state/country student admission policies, students 'publications, their participation in conferences/ seminars/ workshops and co-curricular activities, and awards for their distinguished achievements. Along with these the 'student mentoring' and 'students involvement in decision making regarding teaching should be given due importance. Thus, by taking into account all the relevant criteria as suggested by the already existing tools as well as judiciously blending the other significant teacher/students oriented quality indicators to put forth a more balanced and practical measure for the monitoring and evaluation of post-graduate education is a need of the hour.

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