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Enhancing Quality Assurance Management

&

Benchmarking Strategies in Indian Universities

(EQUAM-BI)

REPORT ON THE SURVEY ON QUALITY ASSURANCE MANAGEMENT: PROCESSES AND PRACTICES OF HIGHER EDUCATION IN INDIA

EXECUTIVE SUMMARY

Introduction

Imparting Quality education has been a world-wide priority for education institutes, however in recent times due to non-alignment of requisite job skills and knowledge imparted, budgetary restraints among other factors, the relevance and quality of higher education is being considered a matter of concern. It is imperative for Higher Education Institutions (HEIs) worldwide to significantly develop a holistic approach to enhance and sustain the quality of the higher education system. Enhancing quality in higher education is not only gaining importance in several geographies, but also as a critical medium for the economic development and progress of nations.

In India, the higher education sector has witnessed an unprecedented growth since independence and is poised to be a country with the largest and youngest employable population in the world. In this context, the Indian higher education sector assumes greater significance even from an international perspective. Concerted efforts are being made by Indian accreditation and regulatory bodies towards improving quality of higher education. The educational reforms brought about by these bodies have significantly addressed and have been driving the quality enhancement requirements of the Indian HEIs. These accreditation and regulatory bodies have developed parameters for ensuring quality in areas like teaching, learning Curriculum Development, Research & Innovation, Infrastructure and Learning Resources, Governance, Leadership and Management, Institutional values and Best Practices.

Nevertheless, Indian HEIs need to transcend from being “driven and controlled” by regulatory intervention, to a state where the HEIs are “self-driven and steered”. The transcendence of HEIs requires a high degree of inter-connectedness with their counterparts of national and international repute which will facilitate benchmarking through peer learning. In the aforesaid direction, the University of Barcelona, La Agencia Nacional de Evaluación de la Calidad y Acreditación (ANECA), along with partner universities in Europe, the National Assessment and Accreditation Council (NAAC), six partner universities in India, collaborated to work on a 3-year research project funded by ERASMUS +, titled ‘Enhancing Quality Assurance Management and Benchmarking Strategies in Indian Universities’ (EQUAMBI).

Study Objectives

Symbiosis International (Deemed University), one of the Indian Partner Universities of the EQUAMBI project, was vested with the responsibility of conducting a survey on *‘Quality Assurance Management Processes & Practices of Higher Education Institutes in India’*. The primary objectives are:

- *To study the existing parameters for evaluating the QAM processes and practices of HEIs in India.*
- *To compare the QAM processes and practices among the different types of HEIs in India*

Methodology

Survey: The study was conducted based on primary survey of HEIs and has also drawn information from secondary sources. The survey instrument (questionnaire) has drawn significantly, the structure and questions, from UNESCO (2017) survey instrument, OECD Questionnaire, Academic Ranking of World Universities GRUP Questionnaire and Outcome Metrics and Performance Indicators (OMPI) document of Symbiosis International (Deemed University). The questionnaire sought both quantitative and qualitative information on:

1. Profile of the HEI
2. Organization of the quality assurance management (QAM) function in the HEI to assess the Quality culture of the organization and the top management's commitment to this function (A and B)
3. Administration of the QAM in the HEI to ensure sustained efforts to collect and collate data and monitor compliance with statutory bodies (C)
4. Processes and Procedures of QAM in the following focus areas of HEIs (D): Teaching, Student Learning, Research, Innovation, Internationalization

Sample: As on June 15, 2018, the number of HEIs in India (excluding affiliated colleges), were 949. This constituted the population of the study. These HEIs were classified based on the type of university *(Central, State, Deemed-to-be, State Private and Institutes of National Importance)* and its geographical location (States of India) illustrated in figure 1.

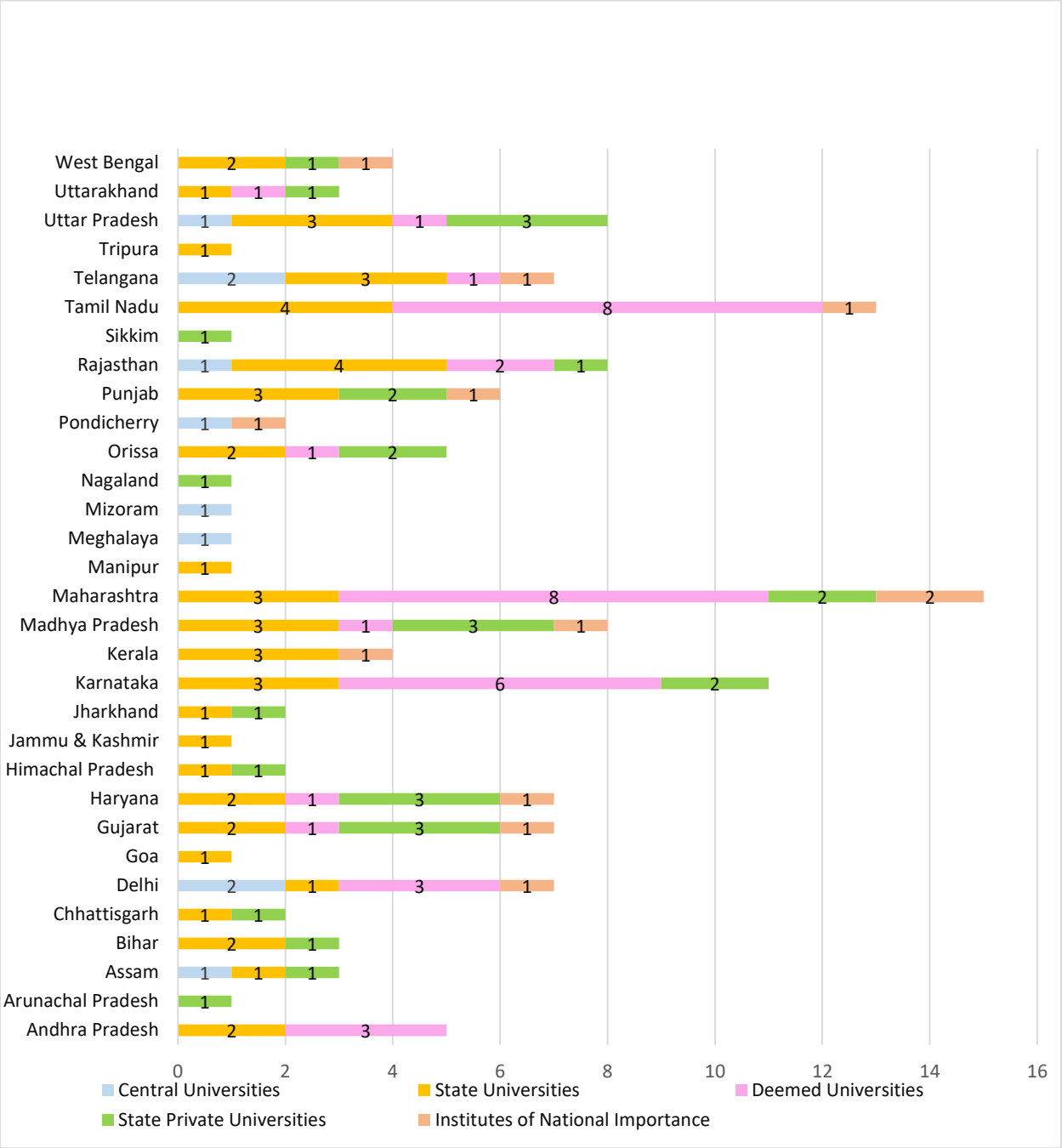

Figure 1: Selected sample HEIs based on location and type

Approximately 15% of the population was selected based on stratified-random sampling method. The questionnaire was administered through online mode with the support of NAAC during the period July to November 2018 and 29 responses were received.

Analysis & Findings

The responses from 29 respondents were analysed both qualitatively and quantitatively.

The quantitative analysis of the QAM data comprises two broad sections. Section I comprises the descriptive analysis of the respondents' data in four segments namely; (a) General Data of HEIs, (b) Organization of QAM function, (c) Administration of QAM and (d) Processes and Practices of QAM. Section II comprises results of the comparative analysis of QAM from among the different types of HEIs.

The subsequent paragraphs explain the two sections of the quantitative analysis, followed by the qualitative analysis of the responses pertaining to objectives, drivers and processes of QAM.

Section 1 (a): General Data of HEIs

The general data comprises of geographical distribution (state/province) of the sample, type (state, central, deemed etc.), nature (funding), and age since inception, highest-level degree offered, size of the students' body, size of the faculty body, and main orientation regarding teaching and research.

1. The 29 HEI participated in the survey, represented 15 states in India (48% of the states to which the survey instrument was administered). Eight HEI (27.6%) are from the state of Karnataka, followed by Tamil Nadu with four HEIs (13.8%), Telangana with three HEIs (10.3%), Gujarat and Odisha with two HEIs (6.9%) each. All the 10 other states had only one HEI (3.4%) each participating in the survey.
2. Of the sample HEIs, the State Universities constitute the maximum representation with 13 HEIs (45%), closely followed by Deemed University with 12 HEIs (41%). There are three Central Universities constituting 10% of the sample and only one Institute of National Importance constituting 3% of the sample size.
3. Regarding the source of funding, 13 HEIs out of the 29 HEIs constituting 44.8% of the sample size funded by their respective State Governments, eight HEIs (27.6%) are private-funded (Corporate Houses, Trusts etc.), six HEIs (20.7%) are Central Government funded and only two HEIs (6.9%) are self-financed from the students' fees.
4. Regarding the age of the HEI, nine HEIs (31% of the sample size) are more than 50 years old, seven HEIs (24.1%) are aged 10-20 years, six HEI (20.7) are aged between 30-40 years, three HEIs (10.3%) are aged between 20-30 years and 2 HEIs (6.9%) each are in the age group of less than 10 years and between 40-50 years.
5. Based on the size of the student body in the HEIs, 17 HEIs (58.6%) out of the total 29 HEIs participated in this study have less than 10000 students. Seven HEIs (24.1%) have within the range 10000-20000 students; three HEIs (10.3%) have students within the range 20000-30000 and one HEI each (6.9%) have total size of student between the range 30000-40000 and more than 50000 respectively.
6. It is found that 27 HEIs constituting 93.1% of the total sample are research and teaching oriented. One HEI (3.4%) is predominantly research-oriented and one HEI (3.4%) is healthcare delivery oriented in addition to its research and teaching orientation.

Section I (b): Organization of QAM function

This section analyses the data about the organization of the QAM function in the HEIs to assess the quality culture of the organization and the top management's commitment to this function. It contains analysis relating to importance of QAM in the overall institutional policy of the HEI, drivers of QAM in the HEIs, age of the QAM department, QAM policy statement, QAM handbook, people and structures involved in QAM and QAM focused activities.

1. It can be seen that all the HEIs accept QAM as important in their overall institutional policy with 24 HEIs (82.8%) stating that QAM is very important and five HEIs (17.2%) stating that QAM is important.
2. Regarding the important drivers of QAM, the top three drivers are i) the need to comply to regulatory bodies ii) the need to track and monitor progress of the QAM activities iii) need to comply to external accreditation agencies is the third top driver for QAM in HEIs according to this research. Establishing systems and processes, stakeholders' expectations, imbibing QAM as a culture, leverage QAM to goal realization and QAM adopting and adaptation all rank in that sequential order.

3. The study finds that with respect to the age of QAM department in the HEIs, 10 HEIs (34.5%) have QAM departments that are 10-15 years old, eight HEIs (27.6%) have QAM departments that are 15-20 years old in, seven HEIs (24.1%) have QAM departments that are 5-10 years old and three HEIs (10.3%) have QAM departments that are less than 5 years old in and one HEI (3.4) has its QAM department, which is more than 20 years old. In all, 18 HEIs out of 29 HEIs in the sample have their QAM department, which exists for 10 years or more.
4. Regarding availability of QAM policy statement at the HEI (central or at distributed levels), 26 HEIs (89.7%) have their institutional QAM Policy, and 25 HEIs (86.2%) stated that the QAM is clearly described in their institutional strategic plan or equivalent document. Interestingly. 14 HEIs (48.3%) had QAM policy statements defined at their own faculty/departments as well. Seven HEIs (24.1%) stated that their HEIs are still in the development phase of an institutional QAM policy statement.
5. Based on the availability of QAM handbook at the HEI (central or at distributed levels), out of the 29 HEIs in the sample only 14 HEIs (48.3%) have a QAM policy handbook at their institutional level. 14 HEIs (48.3%) do not have a handbook and one HEIs (3.4%) stated that they were not aware about the availability of QAM handbook at their institution level. 24 HEIs (79.3%) of the HEIs stated that the practical activities of the QAM were clearly described in other institutional documents. Nine HEIs (31%) stated that faculty/departments had their own QAM handbook, 16 HEIs stated that they do not have QAM handbook at faculty/department levels and four HEIs stated that they did not know if a department-level QAM handbook existed or not. 13 HEIs (44.8%) stated that they are developing the QAM handbook at their institutional level.
6. The analysis about the involvement of people and structures in QAM at the HEIs shows the following. 28 HEIs (96.6%) had their head of the institution involved in QAM. The availability of a dedicated person and QAM committee were found in 26 HEIs (89.7%). Another 26 HEIs (89.7%) stated that a QA committee operates at their University level, 25 HEIs (86.3%) and 19 HEIs (65.5%) had a dedicated unit/cell with specialized QAM staff at the institution level as well at their faculty/departments level respectively. 24 HEIs (82.8%) and a senate (academic council) involved in the QAM of the institution. 18 HEIs had QAM committees in operation at the faculty/department levels. 17 HEIs even had a vice rector or equivalent position involved in the institutional QAM operations. Six HEIs (20.7%) stated that there are no dedicated structures, units, committees or staff members for QAM.
7. The analysis about the focus of QAM on the various activities of the HEIs that is an overall high to very high positive response. This is evident from the fact that the response variable 'very much' and 'much' together are 90% or more in all the activities except in financial viability, wherein it is over 70%.

Section I (c): Administration of QAM at HEIs

This section presents the analysis of data relating to the administration of QAM at the HEIs to ensure sustained efforts to collect and collate data and monitor compliance with statutory and accrediting bodies. The questions about administration of QAM comprises of mode of QAM data collection, mode of storage and retrieval of QAM data, data collection frequency, and data about the QAM initiatives of the HEIs.

1. The distribution of the sample data about the mode of collection of QAM data - 20 HEIs (69%) of the QAM data collection is partially automated and only 6 HEIs (20.7%) have fully automated data collection for QAM. Three HEIs (10.3%) are collecting data manually.
2. QAM data storage and retrieval -The analysis finds that the QAM data of 21 HEIs (72.4%) are centrally stored and retrieved at the university level and only eight HEIs (21.6%) stated that they have a decentralized storage and retrieval of QAM data at their faculty/department/institute levels.
3. Frequency of collection of QAM data - Out of the 29 HEIs 10 HEIs (34.5%) stated that they collect data on an adhoc basis (whenever needed - requirement/need-based), nine HEIs (31%) stated they collect data on a monthly basis; Six HEIs (20.7%), three HEIs (10.7%) and one HEI (3.4%) stated that they collect data on quarterly, annual and half-yearly basis respectively.
4. QAM initiatives- the top three initiatives of QAM are regularly conducted IQAC meetings (stated by 27 HEIs – 93.1%), timely submission of AQAR to NAAC (stated by 27 HEIs – 93.1%) and participation in NIRF ranking (stated by 27 HEIs – 93.1%). Academic administrative audit and initiation of follow-up actions (stated by 24 HEIs – 82.8%)

is the fourth most prevalent initiative of QAM in the HEIs. ISO certification and NBA activities are comparatively not so prevalent initiatives and found only with 10 and 16 HEIs respectively.

Section I (d): QAM Processes and Practices

This section comprises of the analysis of the data relating to the processes and practices of QAM in the following focus areas of HEIs which are - teaching, learning, research, innovation and internationalization.

1. The various processes and tools of QAM, which are relating to the enhancement of teaching in HEIs -The analysis on the QAM process or tools applied to reflect or measure the teaching enhancement shows an overall high percentage of acceptance (80% of the HEIs stating YES for all the variables of teaching enhancement).
2. The process and tools used to reflect/measure the enhancement of student learning in the HEIs shows an overall high percentage of acceptance (86% of the HEIs stating YES for all the variables of student learning). Facilitation of student learning through online, MOOC and blended learning methods (technology-enabled) have not yet in wide practice as compared to other measures, with only 20 HEIs (69%) stating YES to such technology-enabled methods.
3. QAM processes and tools used to monitor student learning in the HEI samples- shows an overall high percentage of acceptance (90% of the HEIs stating YES for all the variables of monitoring student learning).
4. The processes or tools used to monitor/measure the quality of academic staff performance in the HEIs - shows an overall high percentage of acceptance (80% of the HEIs stating YES for four of the six variables of academic staff performance quality). Student evaluation of teachers (28 HEIs – 96.6%), Regular/Annual staff appraisal, Internal evaluation of staff performance for career progression (27 HEIs each – 93.2%) and mentorship arrangement for ensuring performance quality (24 HEIs – 82.8%) are the top four variables of acceptance among the respondents. However, teacher supervision by university authorities (16 HEIs – 55.2%) and peer review of teachers (by fellow-teachers) (12 HEIs – 41.4%) have comparatively lower level of acceptance by the respondents.
5. HEIs evaluation of the student support structure shows an overall high percentage of acceptance (90% of the HEIs stating YES for almost all the variables of student support structures). The availability of an incubation centre for start-ups to encourage and nurture entrepreneurship among students had comparatively lower acceptance (only 20 HEIs – 69%).
6. Processes or tools used to monitor/measure the enhancement of graduate employability in HEIs -The analysis about the process or tools used to monitor or measure the enhancement of graduate employability in HEIs shows an overall high percentage of acceptance (80% of the HEIs stating YES for five of the total seven variables of graduate employability). However, comparatively low acceptance found in employer surveys (20 HEIs - 69%) and graduate tracer studies (12 HEIs - 41.4%).
7. The distribution of data pertaining to the processes or tools used to monitor/measure enhancement of research in HEIs - The analysis about the process or tools used to monitor or measure the enhancement of research in the HEIs shows an overall high percentage of acceptance (80% of the HEIs stating YES for six of the total nine variables of research enhancement). Comparatively low acceptance found in review of current research by nvited external peers, establishment of specialized and inter-disciplinary research clusters (22 HEIs each – 75.9%) and internal peer review of on-going research projects (18 HEIs – 62.1%).
8. The distribution of data with reference to the support system made available for identifying and nurturing innovation in HEIs The analysis about the support systems made available for identifying and nurturing innovation in the HEIs shows an overall high percentage of acceptance (85% of the HEIs stating YES for five of the total six variables of supporting and nurturing innovation). Comparatively low acceptance found in only in the establishment of think tanks (18 HEIs – 62.1%).
9. The processes and tools used to monitor/measure the enhancement of internationalization in the HEIs shows an overall high percentage of acceptance (70% of the HEIs stating YES for 11 of the total 14 variables of internationalization). Comparatively low acceptance found in only in three variables namely monitoring the performance indicators of internationalization policy/strategy, evaluation of partner institutions (18 HEIs each – 62.1%) and evaluation of the international office (16 HEIs – 55.2%).

Section II: Comparative analysis of QAM from among the different types of HEIs

Comparative analysis of Data pertaining to processes and practices of quality assurance management (QAM)

Some important observations from this comparative study are highlighted below:

1. Two-thirds of the Deemed Universities were fee-funded, two were funded by Corporate Houses/Trusts and two were funded by Central Government.
2. Out of the eleven D.Litt/D.Sc/LLD granting HEIs, majority of them are State Universities (64%) while out of the eighteen HEIs granting PhD/Doctorate Level/Fellowship Programme, 50% are Deemed Universities.
3. Need to comply with Regulatory Bodies, need to monitor and review the progress against the pre-set standards, need to establish systems and processes for excellence in HEI are stated to be the top three priorities across all the types of HEIs sample.
4. The analysis clearly indicates that all the four different types of HEI respondents have dedicated committees, people and structures in place for QAM initiatives and have unanimously acknowledged the importance of the top management involvement in the QAM initiatives.
5. Regarding mode of data collection, out of the 29 HEIs of the study, only two state Universities and four Deemed Universities had fully automated processes. Of the remaining, two state universities and one Deemed University still collected data manually and all others had partially automated processes for collection of data.

6. Size of the students' body vs. Faculty FTE

To calculate the faculty student ratio, data for number of students was collected from NIRF, UGC, and University website for 29 Universities based on which the below observation are made.

No of Universities	Faculty Student Ratio
10	<10, one university 4.74
11	>10 and <15
3	>15 and <20
3	>20 and <25
2	>25 and <40

The Average Faculty Student Ratio(FSR) thus derived is 1:13.05

Comparing the above FSR average at 1:13.05 with the UGC and various councils mandated FSR of (1:20 by AICTE, 1:40 by BCI for UG programmes and 1:5 for PG programmes), we can arrive at the conclusion that Indian Universities seem to be taking appropriate measures to improve the FSR.

7. The analysis brings us to the understanding that Indian HEIs have identified compliance with regulatory bodies and accreditation agencies as high priority drivers for QAM, irrespective of their orientation - research-only, teaching-research or any other. Monitoring and reviewing the QAM activities against pre-set standards is another critical driver across all orientations of HEIs.
8. An interesting observation emerges highlighting that younger the HEIs, earlier is the establishment of QAM department. It appears that establishment of QAM departments has been a relatively recent phenomenon. This could be attributed to the thrust for quality consciousness by the regulatory bodies and accreditation agencies.
9. A majority of the HEI respondents in the sample has acknowledged the Quality Policy statement as a strategic document. Statutory compliance to regulatory bodies and accreditation agencies have been the top drivers for the creation of a quality policy document. HEIs that are in the process of developing their institutional QAM policy document are also highly driven by compliance, systems and processes centric factors.

10. We understand that the varying degrees of automation from being 'manual to fully automated' can be related the periodicity of QAM data collection. Full automation of data collection can enable HEIs to shift from being adhoc to being more regular and stream-lined for QAM data collection.
11. QAM data collection is more centralized (over 72% of all the HEIs) than decentralized at all the given frequencies of data collection. Centralization can enable ease of access to timely reporting and dissemination of information to both external and internal stakeholders.
12. The responses bring out the high level of interconnectedness between having a well-articulated QAM structure and processes with the level of compliance required for regulatory, accreditation purposes and participation in rankings.
13. The responses compare the QA measures adopted by the different types of Universities towards enhancement of teaching. It is interesting to note that the responses have brought out that there is no discernable difference between the different types of Universities. All of them have claimed to have processes or tools to measure the following: (i) offer inter disciplinary programmes, (ii) undertake periodic curriculum review, (iii) offer choice based credits, (iv) adopt outcome based education, (v) maintain quality of faculty members, (vi) maintain a healthy student-teacher ratio, (vii) track and recognize faculty achievement, (viii) adopt innovative teaching pedagogy, (ix) identify and sustain best practices and (x) collaborate with the industry extensively.
14. Almost all Universities have claimed to have tools /processes to measure student progression for higher studies/ research.
    Regarding the workload of students too, there is no consistency in measuring workload. Invariably it is measured in terms of credits or courses the definition of which again vary from University to University.
    Regarding MOOC, while about 65 % of the Universities have claimed to facilitate blended learning methods, its effectiveness needs further validation since the infrastructure required for the same is not uniformly available.

    Regarding Student satisfaction survey, while almost all Universities have reported conducting the survey, the comprehensiveness and regularity vary widely.

15. While all Universities have claimed to be monitoring students' learning, consciously linking evaluation to outcomes is still in a nascent stage. Further, in many Universities, the proportion of continuous and formative assessment is small as compared to the summative assessment which might compromise the rigour of academic delivery.
16. While all Universities have reported to have tools /processes to measure the quality of staff performance, the rigour and the comprehensiveness vary. Also, the action taken on the findings of the assessment may not be adequately rewarding for high performers or adequately penalizing for the consistent poor performers.
17. Support systems like Internal Complaints Cell, Anti-ragging committee, grievances redressal cell, that have been mandated by the regulatory bodies are present in all Universities. Other support systems like Academic/career advising, support for special learners, scholarships, health care, placement, hostel accommodation facilities etc. are established by more universities in varying degrees of effectiveness to gain competitive advantage. Establishment of incubation centres for start-ups are reported by only 50% of the state Universities, 75 % of Deemed Universities and 100% of the Central Universities and Institutes of National Importance.
18. The responses bring out that only 12 out of 29 Universities have tools to measure graduate tracer studies. A majority of the Universities have reported to be conducting employer surveys, inviting industry professionals in the curriculum development and review process. However, there could be varying degrees in institutionalizing the same. Universities are becoming increasingly aware of the benefits of a multi-pronged alumni engagement with the realization that a more mature and engaged relationship with the industry and alumni will have a direct bearing on the graduate employability.
19. It is important to note that many HEIs in India have been predominantly teaching institutes until about a decade ago with the focus on research gaining importance. The tools available to monitor/measure the quality of research undertaken at the University will therefore be at different levels of maturity though the structures may be present. In this background, Universities are evolving methods to incentivize quality research.
20. To create a conducive environment to promote a research and innovation culture, Universities are creating an eco-system by establishing think-tanks, collaboration with national and international centres of excellence in areas of futuristic relevance, entrepreneurial development centre and consulting centres for protection of Intellectual Property. However, this is at a nascent stage in most universities.

21. The number of international students admitted in the Universities are below the permitted percentage. Universities are establishing international offices to attract international students, promote student and faculty mobility, engage in joint curriculum development and research etc. Such offices for internationalization are of varying maturity levels, though all Universities may have the structure in place.

Qualitative Analysis:

The qualitative responses regarding the Quality Assurance Management as a function, focuses on the three broad areas – the objectives, the key drivers and the processes adopted.

The objectives of QAM

The purpose of establishing this department/cell ranged from 'regulatory compliance' on one end to 'creating and sustaining a quality culture' at the other. The first one being a reaction to the external environment and the second being an internal calling. Between these two extremes and tending towards either of the ends, were other reasons that justified the need for the QAM function. Some objectives were at the operational level tending towards compliance that include: collecting data, conducting regular meetings, undertaking audits for identifying deviations, initiating corrective actions and generating reports. In the middle of the spectrum, some of the objectives highlighted the need for continuous improvement in curricular, co-curricular and extra- curricular activities etc. Universities identified that "Action-oriented QAM plans" should permeate through all departments and processes to ensure standardization. Tending towards building a quality culture, were objectives of ensuring stakeholder satisfaction and setting benchmarks to ensure sustaining quality to international standards. For example, "Benchmarking quality in every domain of 'PEARL - Pedagogy, Extension, Administration, Research and Learning' was an objective identified by one of the Universities. It is observed that while the Universities were at different stages of evolution in the quality spectrum, even those who have the urge to make quality a culture in the organization are grappling with the process of achieving it.

Drivers of QAM

The respondents acknowledged that the Quality of higher education has a direct bearing on the graduates' intellectual competence to become valuable resources and contribute to nation-building in "Educational, Social, Technological, Environmental and Economic Magnificence" (ESTEEM). Some universities have also identified indicators and devised metrics to periodically review and benchmark their practices to stay relevant to the dynamic regional, national and international environments. One of the drivers of QAM that was highlighted is that it facilitates the realization of the vision and mission of the University. Some Universities have seen QAM initiatives as a means to promote good governance and create an environment of quality consciousness.

Process of collection and collation of data

Majority of the HEIs in the sample had partially automated the data collection primarily for assimilating information about the academic and research functioning of their departments, conduct feedbacks, and monitor project progress. E-portals, Google forms, e-Mails are some of the popular means of data collection. HEIs stated that they collected data on a periodical (monthly, quarterly, half-yearly and annually) as well as need-based (whenever required). The Internal Quality Assurance Cell (IQAC) department collects data periodically for reviewing the process quality against the set metrics. IQAC prepares an annual calendar and the same is shared through the MIS portal at some HEIs. Public relations officer and information officer facilitate timely collection of data.

Conclusion

The study brought out the current status of Quality Assurance Management processes and practices across the different types of HEIs in India and lent itself for comparison among them. The study was limited by the constraints posed with respect to the response rates and the quality of responses to some questions. While the study brings out that many HEIs have claimed to have the necessary QAM structures to provide an enabling environment, the effectiveness of such structures have not been investigated into as they were beyond the scope of this study.

We conclude that the study:

- acknowledges the role of regulation and accreditation agencies towards establishing standards for quality enhancement in HEIs

- reiterates the need for establishing QAM structures that promote a quality culture across HEIs
- reinforce the earlier studies that underpin the significance of quality assurance as a driver of sustained growth.

This study can be extended to assess the effectiveness of the QAM structures from an 'input-process-output' perspective.

To summarize, this study reiterates the role of Quality Systems and Quality Processes as a critical driver of an HEI's sustained growth. In this direction, there is a need to:

1. Encourage all Universities to articulate its own Quality charter that would align with its Vision and Mission.
2. Share good practices of data collection, analysis, monitoring and reporting that will support quality enhancement initiatives of the University.

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