An Analytical Study of ICT-Based Teaching in RTM Nagpur University's Management Institutes for NBA/NAAC Standardisation

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Abstract: In the Indian context, the statutory powers vested with the University Grants Commission (UGC) should uphold and develop quality in Indian institutions of higher education. The main problem, though, is at the second rung B-schools that hundreds of institutes throughout the nation have started. Such institutions have displayed consistently weak standards of quality in several areas critical to the credibility and integrity of institutions of higher education. They have, over the years, been plagued by poor teaching faculty, poor research, and mediocre consulting services, finally leading to poor placement opportunities for students graduating from such institutions. Several committees and commissions on education have, over the years, time and again stressed—directly and indirectly—the imperative need for significant improvement and acknowledgment of quality in the Indian higher education system. This need for improvement not only seeks to raise the level of scholarship but also works towards meeting international standards of education, making the graduates more competitive in the future. The ongoing problems in these institutions highlight the need for overall reforms and rigorous quality control measures to effectively address these long-standing issues. These reforms need to emphasise the attraction and retention of quality faculty members, research culture and innovation, and industry partnerships for improving placement opportunities. Regular evaluation and accreditation mechanisms are also needed to help these institutions meet minimum standards. More importantly, the UGC and other regulators need to take a more proactive role in regulating and guiding these second-tier institutions. This might include offering resources, mentorship schemes, and incentives for quality improvement. In this way, India can go about enhancing the quality of the higher education system, specifically in management education, to make it stronger and internationally competitive.

Keywords: Quality Assurance, Management Education, ICT Integration, Accreditation, Pedagogical Practices

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Introduction

In India, it is the role of the statutory powers of the University Grants Commission (UGC) to ensure quality in Indian universities and colleges.

Section 12 of the UGC Act, 1956 mandates UGC to be charged with "the determination and maintenance of standards of teaching, examinations, and research in universities." To carry out this mandate, the UGC has been actively evolving mechanisms for monitoring quality in universities and colleges directly or indirectly.

The role of UGC in quality assurance goes beyond regulation. It also promotes excellence in higher education in several ways. For improving quality, it has set up national research facilities and Academic Staff Colleges to re-orient teachers and refresh their courses in subject areas. These centres are also the centres of continuous professional development so that the teachers remain abreast with the current advancement in their subject areas as well as pedagogic practices. Throughout the years, different committees and commissions on education have either directly or indirectly highlighted the necessity of quality improvement and recognition in the Indian higher education sector. Such persistent focus underlines the utmost significance of quality in determining the destiny of India's educational scene.

The idea of autonomous colleges, as suggested by the Kothari Commission (1964-66), has its genesis in the idea of quality improvement. This advice was a pioneering move towards strengthening institutions to innovate and excel under a regime of accountability. There has been a huge increase in educational opportunities at all levels, especially in higher education, since the adoption of the National Policy on Education (1968). This growth proves India's efforts to democratise access to education. But with the burgeoning increase in the number of educational institutions, education quality became an issue. The issue was that of how to balance quantity with quality and see that expanded access does not jeopardise education standards. The constitutional amendment in 1976 put education in the concurrent list, which increased the responsibility of the central government to improve the quality **(**Stella and Gnanam, 2003). This change in responsibility highlighted the national significance of education and the necessity for a coordinated effort towards quality improvement.

The New Education Policy (1986) also stressed the identification and recognition of excellence in the performance of institutions and the verification of sub-standard institutions (Mishra, 2006). This policy was a major departure towards a more positive quality assurance approach in higher education. Standardisation in the context of higher education means the acknowledgment and assurance of quality. This is done through several certifications and approvals in academia.

In India, these include membership with regulatory agencies like the UGC and the All India Council for Technical Education (AICTE), accreditation by the National Board of Accreditation (NBA) and the National Assessment and Accreditation Council (NAAC), and certification by the International Organization for Standardisation (ISO). Each of these organizations has a distinct role to play in ensuring that institutions achieve certain quality standards. UGC affiliation guarantees that institutions comply with minimum standards of infrastructure, academic qualification of faculty, and curriculum. AICTE approval is particular to technical education institutions, addressing industry relevance and technical ability. NBA accreditation is specific to the program, judging the quality of individual courses, especially in engineering and management. NAAC accords institutional

accreditation, judging the quality of the institution in general across multiple parameters. ISO certification, which is not limited to education, is a quality management system framework that can be used by educational institutions. These standard mechanisms have several functions. They offer an institutional framework for evaluating and improving their quality on an ongoing basis.

For parents and students, they present a degree of guarantee regarding the quality of education to be received. Accreditations of institutions act as indicators of possible quality graduates to their employers. At the national level, these standards assist in international benchmarking of Indian institutions to global standards, essential for global recognition and cooperation. In addition, these frameworks ensure transparency and accountability, establishing a culture-friendly environment for innovation and excellence. By following these standards, institutions not only attain credibility but also improve their long-term sustainability and growth capacity.

Review of Literature

The quality assurance literature in higher education offers worthwhile information regarding the impact and integration of standardisation elements.

Dhouchak and Kumar (2023) conducted a comparative study on the quality of management education delivered through public and private technology-enabled learning platforms in India. Their findings highlight the role of platforms like SWAYAM in enhancing educational quality and accessibility.

Kumar et al. (2023) discuss the integration and expansion of ICT-based initiatives in the Indian higher education system, emphasising government-led programs and their impact on teaching practices.

Yang (2023) explores how organizational support influences students' ICT self-efficacy, engagement, and satisfaction in blended learning environments, providing insights into effective ICT integration strategies.

Dirckinck-Holmfeld et al. (2023) examine how students in resource-constrained university settings utilise ICT in their study practices, shedding light on the challenges and opportunities of ICT adoption in such contexts.

Madronero and Madronero (2024) provide a systematic review of ICT usage in social science education, identifying trends, tools, and the impact on student performance.

Cheng et al. (2004) outline the process of implementing ISO 9000 within the systems of higher education in Taiwan. The authors believe that the application of ISO 9000 quality systems is positively affecting the quality of education. Their research identifies the way by which standardised quality management systems are easily translated into educational environments to achieve better processes and results.

Khurana (2009) contributed towards the development of management educational institutions and its influence on quality in the case of Haryana. He recommends that institutes emphasise value creation, quality programs, and specified end outcomes. This study stresses the importance of adopting a comprehensive concept of quality, whereby institutions are not only compliant with regulatory requirements but are also attempting to establish distinctive value propositions. Khurana's report highlights the significance of establishing quality initiatives that are aligned with market needs and student performance. The research also suggests that concerned authorities should ensure that demand and supply forces are present. This argument emphasises the necessity of a harmonious process of educational

growth in which institutional expansion is synchronised with demand in the market for graduates. Quality enhancement, says Khurana, must be achieved within a specified timeframe so that institutes are distinguished from institutes that have failed to enhance their quality. The time-based method of quality improvement generates a dynamic system where institutions are constantly encouraged to improve.

As Vlasic et al. (2004) assert, the quality of education is one of the main drivers of business quality and hence enhances competitive advantage. This view connects educational quality with economic performance directly, with a focus on the contribution of higher education to national competitiveness. Through the delivery of high-quality educational services, educational institutions contribute significantly to the development of the national economy and society, and of its individual members. Vlasic et al. also believe that to enhance the quality of education, a key component of economic and social progress in the 21st century, it is necessary to diminish the vast quantity of knowledge students are required to acquire. Rather, they propose to draw students' attention to a system of elementary knowledge, creativity, problem-solving, and lifelong learning. This strategy follows modern theories of education, where skills acquisition takes precedence over rote learning, to equip students with a changing world of work.

Methods

The research utilised the mixed methods design to effectively evaluate the effects of standardisation certifications on RTM Nagpur University-affiliated management institutes.

1. Survey Methodology: The questionnaire was the main data collection instrument used based on requirements from implementation of Certificates of Standardisation (ISO, NBA, and NAAC) in management institutes. The survey served the purpose of collecting quantitative data regarding several facets of the teaching-learning environment, such as pedagogical practices, modes of assessment, and use of technology in education.

2. Exploratory Research: To supplement the quantitative findings, the research also employed qualitative methods. These involved casual conversations with consumers (students), employees (staff and faculty), management, and competitors (other schools). More formal methods via in-depth interviews and case studies were also utilised. These qualitative methods yielded rich, contextual data that supplemented interpretation of quantitative results and captured the intricacies of standardisation application.

3. Expert Interviews: Experts in certification of standardisation were randomly chosen for interviewing from ISO, NAAC, and NBA. These interviews aimed to collect expert views regarding the application of these certifications of standardisation in academics. The views of these experts offered useful insights into the challenges and best practices in applying quality standards in higher education.

The blending of quantitative surveys, qualitative exploratory research, and expert interviews enabled a complete and in-depth understanding of the effect of standardisation certifications on management education quality.

Results

The research aimed to test the following research hypothesis:

H1: Certificates of Standardisation bring positive modifications in the teaching learning process in terms of good learning environment particularly with the help of ICT (Information Communication Technology) To verify this hypothesis, a Chi-Square Test

of Contingency was used as described in Table no. 1 and 2 of Annexure.

The independent variable, Standardisation, was handled as a nominal variable with two response categories (1 = Accredited, 2 = Non-Accredited).

The dependent variable, A Good Teaching Learning Environment, consisted of 11 components that involved ICT like: 1. Online Class tests, 2. PPT presentation, 3. Videos, 4. Computer lab work, 5. Online Analytical software, 6. Class Participation, 7. The Simulation Software 8. Role plays, 9. Field Work, 10. Case Study discussion and 11. Assignment. All these components were measured on a dichotomous scale (1 = Yes, 0 = No). Null hypothesis (H0) was that there is no correlation between Standardisation and Good Teaching Learning Environment, whereas alternative hypothesis (H1) assumed a correlation between the variables. The significance level was fixed at $\alpha = 0.05$. Important Observations from Hypothesis Testing: 1. There were significant correlations between standardisation and all the pedagogical practices under study, except for the use of videos and computer laboratory work. 2. Accredited schools had higher rates of implementation of instructional practices like Online Class tests, ppt presentations, case study discussions, and simulation software than their non-accredited counterparts. 3. The two exceptions, Assignment and Case Study work, were not significantly related to accreditation status. The evidence favours the alternative hypothesis (H1), suggesting that Certificates of Standardisation considerably improve the teaching-learning atmosphere in various ways. This result highlights the positive contribution of accreditation towards enhancing academic processes. Therefore, H1 is accepted. These findings indicate that standardisation certifications and accreditation have a significant influence on the implementation of varied and effective teaching practices in management institutes. The greater implementation rates of various pedagogical practices in accredited institutions show that these certifications promote a more holistic and student-focused approach to education.

Discussion

The primary objective of this study was to investigate the impact of standardisation certifications (ISO, NBA, and NAAC) on the teaching-learning environment in management institutes affiliated with RTM Nagpur University. The findings affirm the importance of certifications in fostering an improved academic environment, providing empirical evidence for their positive influence on pedagogical practices and academic processes.

Restating the Purpose and Contributions: This research points out the way accreditation and certification programs contribute to effective teaching techniques and pedagogic tools in management studies. Through analysing the relationship between certifications and certain teaching practices, this study makes important contributions to the function of standardisation in defining quality education. The findings not only reaffirm the need for standard measures in academic contexts but also underscore their wider implications in making students more competitive and employable.

Findings in Terms of Goals: The research validated major correlations between standardisation and some pedagogic practices such as Online Class tests, ppt presentations, videos, computer lab-work, field-work, class participation, simulation software, and role-plays.

Accredited institutions showed greater implementation of the practices compared to non-accredited institutions.

This indicates that accreditation has a positive impact on both the depth and width of instructional methodology.

Yet, no strong relationship was found between standardisation and the application of case study and assignment work as an instructional tool. This exception could indicate certain contextual variables, like resource constraints or curriculum emphasis, that need to be investigated further.

Connecting Findings to Previous Literature: The findings are consistent with previous research highlighting the contribution of accreditation to quality education (Cheng et al. 2004; Khurana, 2007). Cheng et al. (2004) observed that ISO 9000 system implementation enhances institutional processes, whereas Khurana (2009) underlined the requirement for periodic quality improvement to align with educational needs. Such results support Vlasic et al.'s observation that educational quality is a major driver of economic and social advancement.

Further, the focus on varied pedagogical practices within accredited institutes highlights the flexibility and creativity espoused by Mishra (2006).

The findings of the study are in support of the argument that standardisation promotes institutions to be more holistic and student-oriented in their educational approach, consistent with modern theories of education that focus on the development of skills and experiential learning opportunities.

Possible Explanations for Unexpected Findings: The absence of a statistically significant relationship between videos and computer lab work and accreditation status can be explained due to diverse institutional priorities or technology differences. Non-accredited institutions might prefer conventional approaches to technology-based tools, perhaps due to financial limitations or a lack of technical skills. Accredited institutions, though better resourced, might also not make the best use of these tools, relying more on interactive and experiential learning methods like role plays and simulation software. Another explanation could be that the utilisation of videos and computer labs has become widespread in all institutions, both accredited and non-accredited, because of the overall trend of digitalisation in education. This widespread use could have resulted in no meaningful difference between accredited and non-accredited institutions in these areas.

Managerial Implications: These results offer practical implications for policymakers and administrators in higher education. Accreditation agencies like NBA and NAAC should lay greater stress on the inclusion of multiple and novel teaching methodologies as a parameter of standardisation. This can entail guidelines or standards for putting in place diverse pedagogic practices. Management schools must use certifications as not only regulatory instruments, but also as strategic facilitators for excellence in academia. This entails utilising the process of accreditation as a chance for self-evaluation and ongoing improvement, as opposed to a simplistic box-ticking exercise. In addition, the research highlights the significance of budgeting for technological improvements, so that all institutes, whether accredited or not, can implement advanced teaching aids. Institutions need to prioritise filling the gaps in those sectors where wide variations were not noticed, e.g., the application of videos and computer laboratories, to provide an integrated and technology-enabled learning atmosphere. Policymakers may plan to introduce incentives or support structures to enable non-accredited institutions to enhance their teaching-learning settings. This might involve technology upgradation grants, faculty development schemes, or mentorship programs involving accredited and non-accredited institutions.

Conclusions

From the results of this research, the following are some major conclusions that can be derived.

1. Accredited colleges assess student performance based on a variegated variety of modes such as Online Class tests, ppt presentations, videos and Computer lab. This diversified mode of assessment indicates a more inclusive assessment of student learning and abilities.

2. Internal assessment of students at non-accredited colleges is largely dependent on Online Class tests, assignments, and ppt presentations. Although these approaches are beneficial, the narrower variety indicates a potential area of enhancement in diversification of assessment methods.

3. Accredited Management Colleges of RTM Nagpur University primarily attribute the same emphasis towards Computer labs, Role plays, fieldwork, Simulation software, and videos, in addition to conventional lectures via Cases. It reflects adherence towards giving diverse students a qualitative diverse learning process marrying theoretical concept along with hands-on application.

4. RTM Nagpur University's non-accredited management colleges primarily employ Cases, Assignments, and Roles as pedagogies in addition to general lecturing classes. Although these are useful resources, the relatively narrower scope in relation to accredited colleges indicates a potential to increase the pedagogical methods.

5. RTM Nagpur University-affiliated accredited management colleges utilise cutting-edge library software, Department-wise Advanced software, Internal Assessment software, MS Office, SAP, and SPSS. The high level of usage of technology speaks volumes about a serious commitment towards offering students access to industry-based tools and ensuring overall improvement in learning.

6. Most RTM Nagpur University-affiliated non-accredited management colleges utilise the MS Office and SPSS software to a greater extent.

Although these are necessary tools, the less extensive range than that of accredited colleges indicates a possible area for technological improvement.

These findings point out the beneficial effect of accreditation on the teaching-learning environment of management institutes.

Accredited institutions reflect a more varied and thorough approach to teaching methods as well as evaluation techniques.

They further exhibit more embedding of technology into the learning process, potentially even more suitably preparing students to deal with the realities of today's workplace.

Limitations

Even though this research gives considerable insights into how standardisation certification has influenced quality management education, one must bear its limitations in mind.

1. The research only deals with RTM Nagpur University-affiliated management institutes and thus may not present the totality of Indian management education practice diversity. For that reason, an extrapolation of these findings into a general framework should be considered with a note of caution. Regional differences in educational practice, resources, and cultural orientations may affect standardisation certification implementation and effects.

2. The study only assessed the effect of ISO, NBA, and NAAC certification on teaching-learning environments. Other important quality assurance frameworks or institutional variables like private accreditations or industry collaborations were not considered. These other factors may be involved in determining the quality of education and

may interact with the effects of the examined certifications.

3. The research was largely concerned with whether or not specific teaching practices and technologies existed, without exploring in detail the effectiveness or quality of their execution. Subsequent research would be enhanced by a more sophisticated analysis of the execution of such practices and their influence on students' learning outcomes.

4. The cross-sectional design of the study gives a snapshot of the situation at hand but fails to show the longitudinal impact of accreditation. A longitudinal study would be able to provide insights into how the institutions change over time following accreditation.

5. The research was based on self-reported data from institutions and is therefore potentially subject to social desirability bias. Future studies might include more objective measures or third-party ratings to confirm the results.

6. Although the research has identified correlations between certain educational practices and accreditation, it does not have the ability to assess causality. Alternative explanations, including leadership or resources within institutions, may determine both the chances of accreditation and the implementation of varied teaching practices.

7. The research did not thoroughly investigate the views of employers, alumni, or students.
Inviting these stakeholders' opinions may yield a better insight into the effects of accreditation on education quality and results.

Regardless of these drawbacks, the research offers important information regarding the function of standardisation certifications in defining the quality of management education. Future studies can use these results to overcome these drawbacks and expand our knowledge on quality assurance in higher education.

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