

Case Study

IQAC Contribution for Improvement in Education for Quality: A Case Study at Sreyas Institute of Engineering and Technology

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How to cite this article:

Reddy ACS, Akella S, Krishnaiah Y et al. IQAC Contribution for Improvement in Education for Quality: A Case Study at Sreyas Institute of Engineering and Technology. *J Adv Res Busi Law Tech Mgmt* 2019; 2(2): 41-48.

Date of Submission: 2019-12-08

Date of Acceptance: 2019-12-23

A B S T R A C T

The internal quality assurance system is a self-regulated responsible authority formed in higher education institutions. It aims for continuous improvement of educational standards in the institution for achieving excellence in academics. Sreyas Institute of Engineering and Technology (SIET), Hyderabad is one of the leading educational institutions offering Technical Education. It has a systematised mechanisms, viz academic auditing, quality management strategies to meet its academic goals. The Internal Quality Assurance Cell (IQAC) at Sreyas is formed with an objective of enhancing the quality in education as well as, a prerequisite for accreditation bodies. It is functioning for developing quality parameters for institution educational and administrative activities, creating a student-centric teaching environment, formats and implements feedback/ suggestions from stake holders on quality aspects, documentation of quality enhancement measures, and acts as a nodal agency for coordinating quality related activities. It also prepares annual reports for NAAC and NBA. This paper discusses the Quality Assurance Policy initiatives and implementation measures adopted by Quality Assurance Cell at Sreyas Institute of Engineering and Technology.

Keywords: Higher Educational Institution, Internal Quality Assurance System, Internal Quality Assurance Cell, Quality Initiatives in Higher Education

Introduction

Quality is a concern for all managers. The world of business is focused on quality. Today all of us are striving for quality and Value. Quality is conformance of requirements in effective way with respect to your competitors along with compliance of regulatory authorities' requirements (Mishra, 2018). In this response, Internal Quality Assurance Cell (IQAC) has been initiated through The National Assessment and Accreditation Council (NAAC).

The quality enhancement is a continuous process and needs

to be monitored and controlled by IQAC.^{1,2} The IQACs in higher education institutions are framed with self-regulated responsibilities for continuous improvement of quality to achieve academic excellence.³ The primary goals and functions of IQAC.

Quality Policy

- The quality policy is developed by taking into consideration the management policy, student progress, expectations of the society and the welfare of the employees.^{4,5}

- The quality policy is communicated to each and every stakeholder through various channels of communication like college prospectus, college calendar and teaching plan booklets. The quality policy has been displayed on every floor of the institution to communicate it to all who visit the institute and in the institutional website.
- The quality policy is deployed by ensuring quality in all the activities and events conducted in the Institute. Quality is also ensured, maintained and given utmost importance in imparting higher education in management, computer science, social work, environment and ethics.
- The Quality Policy is also maintained in the functioning of the library and information centre, computer labs, infrastructure, administration, examination, student information system and placements. For all the activities that take place in the Institute, review of the progress is done at every stage to ensure the quality policy. On the completion of the activity, all the committee members will review the entire event by taking feedback from the participants, experts and internal staff members. Flaws if any identified, will be rectified for future with modifications and new methods.

Primary Goals

- Developing a quality educational and administrative system for consistent and Catalytic programmed action in education for improving the academic and administrative performance of the Institution.
- Promoting measures of institutional functioning towards quality enhancement through internalisation of quality culture and institutionalisation of best practices.

Functions of IQAC

- Benchmark and Indicators for academic and administrative activities are developed.^{6,7}
- Facilitating the creation of a learner-centric environment and to adopt the required knowledge and technology for participatory teaching and learning process.
- Students, parents and other stakeholders are involved for constructive comments to improve quality-related institutional processes.
- Transparency of information is assured for quality indicators of higher education.
- Quality circle and seminar on different scale is focused.⁸⁻¹⁰
- Documentation of improvement activities is focused on academics.
- Culture of self learning through dissemination is focused.

Overview of SIET

Sreyas Institute of Engineering and Technology (SIET) is an outcome of three visionaries and founders for producing technocrats to suit the local and global market.

The thoughts of founders transformed into deeds with world-class amenities in the institution, where the engineers are produced with profound knowledge and skills to become global technocrats. Institute has been accredited by NBA and NAAC with its proven track record of success leaving the stakeholders agape. The three visionary founders are:

Sri Anantula Vinay Kumar Reddy, the Chairman of the college, is a dynamic and dedicated personality, having strong motto towards providing the highest quality technical education.

Sri Chintala Ravindranath Yadav, the Secretary, a perspective academician with management skills and having pursued Post-Graduation from the University of North Carolina at Greensboro USA is providing world-class facilities.

Sri Nirvetla Sarath Reddy, the CEO, a successful entrepreneur is providing guidance and opportunities for employment to the students of SREYAS in India and abroad.

The class rooms are Wi-Fi enabled and furnished with high resolution projectors for providing a visual effect for making teaching more effective. The laboratories are well-established with the latest equipment and software as per the University norms of JNTUH. The Library is a double storied, furnished with 2,000 titles for UG & PG students and subscribed for E-Journals and online magazines to enable students to direct access. Apart from that, CDs of NPTEL, E-Lectures are also available for the staff and the students. The students and staff are accessing the library for their research and project information. The Research and development cell has been established in the campus to encourage students to take up innovative projects and faculty to pursue Ph.D. and other projects.

Several Faculty development programs are conducted regularly to create insight on the latest pedagogical methods and to brush up their teaching methodologies to suit the modern context. To bridge the gap between the academics and the industry, several interactions with the most renowned Chapters like ISTE, IIW, ISHRAE, SAE, IEEE etc. taking place regularly. The rich infrastructure, concepts and practice through CRT programs, mock interviews, group discussions, etc. are helping students in creating opportunities to get immediate employment.

Strengths

- The institute is having a clear Vision & Mission and established policies and procedures.
- The high quality, competent and dedicated faculty who are always ready to take up an extra mile to mentor the students towards their goals.
- Proactive Career and Placement cell with a professional counsellor for the student support.
- The Institute has fresh breath environment, the best playgrounds, completely eco-friendly environment

located within the city limits incurring world-class infrastructure with Wi-Fi connectivity.

- Wide ranges of extension, co-curricular and extracurricular activities are conducted.
- Contributions towards Research & Technology in tune with Industrial needs.

Formation of IQAC at SIET

The Centre for Quality Management is one of the important centres formed for the enhancement of quality education. Internal Quality Assurance Cell (IQAC) was formed in 2015 at SIET with the objective to realise the goals of quality enhancement and improve the performance of the institute. The IQAC supports the institution in monitoring and evaluating the quality of various enrichment programmes through IQAC.

The IQAC has been formed to meet the educational quality, with continuous improvement objective, steered by IQAC Director supported by staff from different departments.

Objective

This committee was constituted to ensure that all the standards with regard to curriculum are met.

Function

Designing and Maintaining quality assurance is focused by IQAC.

The primary aim of IQAC at SREYAS is:

- To assure a conscious, consistent system for improving the academic and administrative abilities of the institution.
- To promote and take appropriate measures for the functioning of the institute to develop a quality culture and adopting best practices.

IQAC Coordinator

The role of the IQAC coordinator at SREYAS is highly responsible for the effectiveness of overall education quality. IQAC Coordinator focuses on value based education. Value is the worth we allocate. Value Management practices is a highly recommended practice in a developed country as an effective competitive tool also (Mishra, 2019).

The IQAC coordinator is having good command over the operation and use of a computer, data management, drafting skills, effective communication and the application of different software for adopting quality.

Quality Policy

The Sreyas Institute of Engineering and Technology strives to deliver global quality policy through delivery of comprehensive, continually enhanced, global quality professional education through well qualified teaching staff maintained at proper cadre ratio and planned interaction

with the stakeholders concerned.

The Sreyas Institute of Engineering and Technology is committed for implementation of quality teaching and learning process. It also focuses on personality development of students through certificate programs, training programs skill development programs, cultural, co-curricular and extra-curricular activities to enhance the student knowledge. The students are mentally trained to follow discipline and good character building through personality development programs.

IQAC Initiatives at SIET

Teacher's Quality: To enhance the quality of teaching, regular Faculty Development Programmes (FDP) introduced as a regular feature. Collaborative programs with other institutions are organized to enhance teacher's quality. The faculty members are encouraged to acquire additional qualifications, research degrees and impart certification programs to foster their skills.

Delivery of the Curriculum: For effective delivery of the curriculum, the faculty in advance prepares their work diary, lesson plan and course material for the teaching of the subject.



Figure 1. Lecture on correlation of Bhagavad Gita with Thermodynamics



Figure 2. Principal meeting with TTK Reddy (Researcher) on Importance of Research in Engineering

Strengthening of Research Activities: The IQAC recommended for the creation of research centres in each department under the control of senior faculty. The IQAC encourages the faculty to do research and provides basic facilities and monitors the research works and the writing of articles in journals and international conferences.

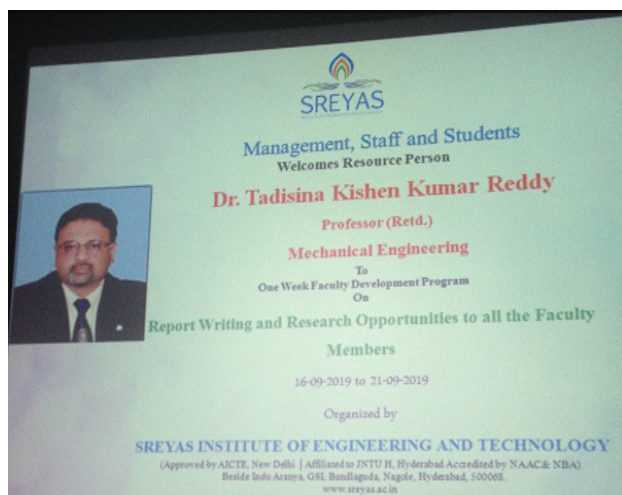


Figure 3. Guest lecture on Research Grants, Research Methods, Paper Writing

Personality Development Programmes: Student Development Programmes are important to equip the students to meet the challenges in their career. Value Added programmes like Certificate Courses are offered to the students to bridge the gap between the university syllabus and industry requirements, regular industrial visits and industry-academia interactions are organised so as to get practical exposure to the functioning of the organisation.

Orientation Programmes: Apart from career building, institute conducts programmes to develop the right orientation and a positive attitude.

Additional Academic Support in order to ensure Holistic Development: Teaching management principles through examples from the great epics like Ramayana, Mahabharatha, Bhagavad Gita, Vedas, Upanishads, etc., spiritual lectures under Vivekananda study centre and programmes organized during Swami Vivekananda Jayanthi, Sri Ramakrishna Paramahansa Jayanthi, Batukamma, Sankranti, Independence day, etc.

Mental Maturity and Skill Development Courses: Corporate Yoga and mind control programmes are offered to the students to enhance the power of concentration, overcome stress and maintain good physical and mental health and to ensure mental maturity.

Placement: The Institute undertakes a broad range of vocational education, entrepreneurial training and employability skills to facilitate faster placement and better adjustment in the work situations.



Figure 4. Sampling plantation in the campus on 15th August 2019

Preparedness for challenges: The students are encouraged to define their own training and development needs and based on the needs of students & the corporate, the Institute imparts employability skills. As the business world is filled with challenges and risks, the purpose of education is to prepare the students to face these challenges and take up the risk with courage.

Administration

The administrative system supports the institution in the development and enhancement of the quality education. The different committees set up by the institution always respond to the administrative needs. The Advisory Board and the Governing Council body are set up with the members from management and academia. The various course co-ordinators facilitate internal administration of their departments and link it with the overall administration of the institute supervised by the Head of the institute.

Infrastructural

The infrastructure provided is well sufficient to meet the requirements of the IQAC quality policy for academic and administrative functions of the institute. The quality manual prepared by IQAC and mentioned is focusing on the quality policy to be adopted in all sections of the institute. All the IQAC decisions are approved and are effectively implemented. The alumni contributions to the institute for enriching the quality of education is a continuous process. The alumni are having regular communications through academic and social links. They are instrumental in getting access for making links with various industries, employers and society. Alumni also assists in identifying the special skills required for the students in order to get specific positions in various companies.

The integration of academic and administrative activities can be witnessed at three levels which include strategic, functional and operational levels.

Strategic Level: Staff members as well as technical staff are involved in framing the academic policies, procedures, guidelines, rules and regulations. All these policies and procedures are effectively implemented to ensure smooth and systematic functioning of the institute.

Functional Level: All the Teaching Staff participates in sharing the knowledge by discussing the latest trends in their respective areas of specialization. The coordinators and the members of different departments meet together and plan the programmes to be conducted. Office staff is involved in the preparation of the annual budget of the institute, taking into consideration the approved fee structure. They also correspond with the Department of Higher Education, JNTUH University and AICTE regional office to fulfill their requirements for the smooth functioning of the institute's activities.

Operational level: All the staff members are involved in implementing the policies, procedures and framework designed by the top management in order to maintain and achieve the quality standards. The institution provides following training to its staff for effective implementation of the Quality assurance procedures.

- Faculty Development Programmes, lectures and

Workshops are planned to give more thrust on pedagogy. As a result the innovations across the field are practiced in the teaching methodology.

- Many industry experts and renowned professors interact with the faculty members. This results in enhancement of the performance.
- Attending outreach programmes by faculty members also enriches them in benchmarking services of the institution.
- The training in office management software has improved efficiency and time saving. The lower staff are maintaining efficiency in the upkeep of the infrastructure.

Regular Academic Audits

The feed-back from students, faculty self-appraisal and Principal appraisal on faculty will be evaluated by IQAC and sent to the executive body of the institution. The executive body reviews the teaching performance of the faculty. The overall performance of the faculty can be decided based on the subject easiness, FDPs attended, conferences attended, articles published, etc. They will take appropriate individual measures for improving the teaching skills. Some of the improvements in institutional activities initiated due to the outcomes of the academic audit are listed in Table 1.

Table 1.Improvements in institutional activities initiated due to the outcomes of academic audit

S. No.	Audit Outcome	Improvements in Institutional Activities
1.	Improving the result	<ul style="list-style-type: none"> • Proper counselling to students and parents • Special classes and Tutorials by senior faculty • Close monitoring of student performance in mid examinations • Special review classes for weak students
2.	Faculty performance	<ul style="list-style-type: none"> • Motivational lectures and seminars for faculty • FDPs on special subjects where the faculty are freshmen • Retaining experienced and well qualified faculty
3.	Research and publication	<ul style="list-style-type: none"> • Providing opportunities • Identification of research centres • Organizing workshop on Research methodology and publications.
4.	Need for further strengthening co-curricular activities	<ul style="list-style-type: none"> • Introduction of certificate programmes • Compulsory projects • More programs and events.
5.	Need of improving the placement	<ul style="list-style-type: none"> • Exclusive placement cell • More collaboration with industries • Conduct of Job Fests.
6.	Less admissions in few branches	<ul style="list-style-type: none"> • Increased the awareness in students • Regular updating of the web-site • Additional skill development programmes • Concessional fee for female students • Free transport for female students • Hostel facility within the campus for female students

IQAC mechanisms are aligned with the requirements of the AICTE and JNTU, Hyderabad University norms. The institute strictly follows the attendance requirement of students, number of working days and number of classes to be conducted, internal examinations, internal assessment mechanism, performance in lab experiments, mini project, major project, seminar, comprehensive viva etc. The IQAC of the institution has prepared a structured mechanism to continuously review the teaching learning process as given in Table 2.

- Presentation skill (Voice, Language, Clarity)
- Methodology in Teaching
- Interaction with the students
- Accessibility to the students outside the class
- Quality & understandability of Study Materials
- Timely services provided by the office & library staff to the students
- a. Student feedback through grievance cell
- b. Student feedback through Suggestion Box

Table 2. Structured mechanisms to continuously review the teaching-learning process

S. No.	Mechanisms Structure, methodologies of operation	Outcome
1.	Attendance Register	Faculty and students realise the importance of the classes and the attendance of students is recorded in the attendance register as well as the online portal immediately after completion of the class
2.	Lecture schedule	The lecture schedule is prepared by every faculty well in advance according to the academic calendar supplied by the University. This gives a clear picture of conducting classes systematically.
3.	Performance Appraisal	Self-appraisal is submitted by the faculty in every academic year and the head of the institute marks his assessment and forwards to board members for rewards in the form of increments and/or appreciations
4.	Student Feedback	Appraisal forms are distributed to the students on the last working day of the semester. This is confidently collected and passed on to the head of the institute for review.
5.	Result Analysis	The result analysis sheet with the percentage of marks scored by the students in each of the subjects is prepared. This can be considered as a measure for the performance of the faculty.
6.	Management Meetings with the Faculty	Meetings with faculty are conducted by management representatives and head of the institute. A Poor performance like low pass percentage and poor marks are a sort of explanation. The Faculty develops increased accountability.

Stakeholders

The IQAC organises interactive meetings with the stakeholders, viz, parents, students, alumni, industry, university, community, etc., for communicating the quality assurance policies, mechanisms and outcomes.

Collecting Feedback

Student feedback is collected on the following parameters:

- Regularity in conducting classes
- Time-consciousness
- Preparation for the Classes
- Syllabus completion in time
- Competency in the subject concerned

- c. Student feedback through direct access to principal
- d. Student feedback through Course co-ordinators
- e. Parents feedback on various communications from the college such as SMS on Attendance & SMS on internal marks
- g. Feedback through CCD Camera fitted in all classrooms, recorded & monitoring at Principal Chamber.

Improving service based on Feedback

- Faculty meetings are conducted based on student feedback.
- Appraisal of classroom situation by Course Coordinator/ Principal visiting classes periodically.
- The college regularly monitors facebook postings and takes corrective actions in genuine cases.

Table 3. Questionnaire on IQAC Performance

S. No.	Problem/ Issue	Yes	No	Don't Know
1.	Do you think that the Internal Quality Assurance Cell (IQAC) is a significant body monitoring the process of teaching, learning and evaluation?			
2.	Does IQAC contribute to maintaining quality standards in teaching, learning and evaluation?			
3.	Does IQAC contribute to maintaining quality standards in teaching, learning and evaluation?			
4.	Is IQAC a capable body to administer various academic/ educational activities in the college/ institution?			
5.	Is there proper coordination between IQAC and management, IQAC and teaching & non-teaching/support staff, IQAC and students, or coordination among all the stakeholders of the institution through IQAC?			
6.	Does IQAC need more autonomy, especially financial, for better performance?			
7.	Do IQAC and its coordinator work under pressure of principal and management or both			
8.	Does IQAC promote, stimulate and monitor the internal evaluation of the students, e.g., tests, tutorials, assignments, practicums and projects?			
9.	Are you satisfied with working with IQAC and its coordinator?			
10.	Does the IQAC coordinator need more autonomy (e.g., academic, financial and administrative) for the smooth and better functioning of IQAC?			
11.	Should IQAC be replaced by any other committee/ body/ agency or the like?			

Conclusion

The market for graduated students increased to work anywhere in the world due to globalization. This resulted in a drastic expansion of higher education in developing countries like India. The responsibility of higher educational institutions increased to create professionals to meet the standards at global level. The Indian higher education is widely recognized and respected across the globe due to the initiative by NAAC and NBA. The Sreyas institute of Engineering and Technology is providing quality education with the assistance of IQAC and the students are getting optimum benefits through quality education.

The important initiatives of IQAC are:

- Regular academic audit of departments
- Assessing the impact of quality initiatives of the institution.
- Review of teaching learning process and learning outcomes at periodic intervals.

It is proudly quoted that, Internal Quality Assurance Cell (IQAC) has contributed significantly to institutionalising quality assurance strategies and processes in Sreyas Institute of Engineering and Technology.

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