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Process Improvement in Higher Education: Managerial Perspectives

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Abstract

This study is an attempt to explore the role Higher Education Institutions must play in the ever-changing world and associated organisational development interventions necessary for shaping changes in organization forms. It highlights the process interventions as measures of Quality Improvement in different industries and explores the scope of Higher Education along similar lines. The relationship between process improvement and organisational development has been studied upon with focus on quality improvement. This study also delves upon how Quality improvement in higher education entails a systematic and continuous effort to enhance the efficiency, effectiveness, and overall performance of educational processes by identifying areas for improvement, implementing targeted enhancements, and ensuring compliance with standards and regulations. Higher Education imperatives and related Managerial Perspectives have been explored by the authors based on process interventions in diverse sectors.

Key Words

Higher Education, Quality Improvement, Process Improvement, Process Mapping, Managerial Perspectives.

1.0 Introduction

The NEP 2020 has paved ways for radical transformation in the functioning of Higher Education Institutions (HEIs). In the changing world characterized by globalisation, information technology, environmental changes, automation, increased concern for values and skills, regulations are shaping changes in organization forms. HEIs are no exceptions. In order to survive and to attain long term success, organisational change is vital. Organisation Development initiatives and process interventions play a significant role in the process of change. The HEIs need to deploy several processes in different functional areas of admission, academics, evaluation, finance and administration. Designing and administering the processes in HEIs have some managerial issues and perspectives. This article intends to address the process imperatives.

2.0 Historical Perspectives of Education

The Renaissance period witnessed a resurgence of interest in classical learning, humanism, and the arts. This led to the establishment of universities and the spread of educational institutions across Europe. Education became more accessible to the upper classes, and subjects like mathematics, philosophy, and natural sciences gained prominence alongside religious studies. In the 18th and 19th centuries, the Industrial Revolution brought significant changes to education. The need for skilled workers fuelled the growth of public schools and the development of a standardized curriculum. In the 20th century, education systems worldwide underwent significant transformations. Education became more standardized and structured, and curricula were designed to meet the needs of an increasingly industrialized and technological society. The late 20th and early 21st centuries has witnessed the rise of information technology, globalization, and the knowledge economy. Education has adapted to these changes by incorporating digital technologies, emphasizing critical thinking, problem-solving, and lifelong learning skills. In many countries, efforts have been made to ensure equitable access to education, promote inclusive practices, and address the challenges posed by societal issues such as inequality and sustainability. All these developments substantiate the need for quality assurance in education in which process design and implementation play very important roles.

There is a growing need felt to include quality improvement tools and philosophies like TQM, Six Sigma in HEIs to be more competitive in global competition (Begum, n.d.). The emphasis is on preparing individuals for a globalized, interconnected world, fostering creativity, adaptability, and an appreciation for cultural diversity.

3.0 Process Improvement

Process is a set of interrelated or interacting activities which transforms inputs into outputs. Organizations including HEIs may comprise a number of linked processes that need to be identified and managed. Education in itself comprises mental processing activities. The process approach therefore basically implies systematic identification and management of activities and interactions between activities. Used properly, the process approach provides control over the processes, the link between processes and the combination and interaction of processes (To, Lee, & Yu, 2011)

Role of top management and their contributions in process interventions can go a long way in organization development. In case of HEIs, process improvement refers to the systematic and continuous effort to enhance the efficiency, effectiveness, and overall performance of specific processes within. It involves identifying, analysing, and modifying existing processes to eliminate inefficiencies, reduce errors, enhance productivity, and improve outcomes. For example, UGC mandate is online admission. This requires processes for learner awareness, sensitization, record processing, database development, procurement of digitised technology and its maintenance. Process optimization would deliver better results, ensure compliance to regulations, and facilitate achievement of organizational objectives. It is a continuous endeavour aimed at driving efficiency and effectiveness, ensuring quality in an organization's operations and reducing costs.

4.0 Process and Organization Development (OD)

An organization is driven by Vision, Mission, Goals and Objectives backed by adequate processes. Vision reflects the hopes, desires, and aspirations of the management of the organization. It encapsulates the changes it attempts to bring through the efforts of the organization. The HEIs have formulated vision statements, documents, and Strategic Action Plans to meet the requirements of NAAC for assessment and accreditation. The mission lays down the foundation for action and guides the strategies of HEIs. All these are part of Organization Development initiatives. Most definitions of OD emphasize the importance of organization process (Beckhard, 1969), (Burke & Hornstein, 1972). Beckhard defines OD as an effort which is planned, organisation wide, managed from the top to increase organisational effectiveness and health using behavioural science knowledge (Beckhard, 1969). It is the responsibility of the top management to direct the entire resources including the human resources towards the objectives which are derived from the vision.

The intended outcome of an OD initiative can be achieved through a combination of human resource and process supported by technology. In case of an HEI, human resources include individuals, workgroups, and teams at all levels – academic, non-academic, and other academics.

5.0 Process Improvement and Quality in Diverse Sectors

Quality improvement measures have been undertaken in various fields and industries till the 21st century, driven by the pursuit of excellence and meeting customer expectations. In the manufacturing industry, initiatives such as Total Quality Management (TQM), Six Sigma, and Lean Manufacturing have revolutionized quality practices. Companies like Toyota have embraced TQM principles to enhance production efficiency, reduce waste, and improve product quality. Lean manufacturing techniques have been widely adopted to streamline processes and eliminate non-value-added activities, leading to improved productivity and customer satisfaction. Kumar B (2013) has analysed the process improvement due to implementation of lean tools in the value chain of selected four product lines in Garment Industry and found high level of improvement gain due to the implementation of lean manufacturing tools.

The automobile industry has witnessed significant quality improvement measures through the implementation of rigorous quality management systems. For instance, the ISO/TS 16949 standard provides a framework for automotive quality management, ensuring compliance with stringent quality standards throughout the supply chain. This has led to improved product reliability, safety, and customer satisfaction. Lean-Kaizen concepts have not only been effectively applied to SMEs but also improved their production, quality, and system of the organization. By using waste elimination techniques such as VSM, poka-yoke, 5S, standardization, Kaizen and root cause analysis, lean benefits were recorded such as reduced cycle time, reduced cost, improved efficiency, improved quality etc. (Kumar, 2018) Raju H.K. (2014) has found that there are significant opportunities in adopting Lean Sigma approach to eliminate non-value-added activities, reduce cost, improve lead-time, and cycle time, and increase the process efficiency in the software development activities to deliver value to the customer.

In the healthcare sector, quality improvement initiatives have focused on enhancing patient safety, reducing medical errors, and improving overall care delivery. The adoption of evidence-based practices, electronic health records, and patient safety protocols has contributed to better healthcare outcomes. The transition from paper-based records to Electronic Medical Records (EMR) has significantly improved efficiency in healthcare. EMRs allow for quick access to patient information, reducing paperwork, eliminating errors, and enabling faster communication between healthcare professionals. This streamlined process enhances patient care, reduces administrative burden, and improves overall operational efficiency.In another example, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) in the United States has established rigorous accreditation standards that healthcare organizations must meet, driving continuous quality improvement. In his study towards developing a lean six sigma model for the Hospital Industry, Selvan C (2015) has found Top management commitment; education & training; employee's empowerment; communication; patient focus; data collection & measurement; and infrastructure to be the most critical factors.

Anand K. (2015) is of the opinion that Six Sigma strategy can be used to eliminate causes of defects in business processes by concentrating on outputs which are critical to customers. His study also concludes that it is an approach that can be used to increase savings, on-time delivery and sigma levels that can reduce costs and increase revenue growth and business profitability.

These examples highlight how quality improvement and process interventions have been across diverse sectors to enhance performance, productivity, and customer satisfaction. By adopting systematic approaches, organizations in education, manufacturing, automobile, and

healthcare industries have been able to identify areas for improvement, implement best practices, and drive a culture of continuous quality enhancement. Such measures have not only benefited the organizations but have also resulted in improved outcomes for stakeholders and customers.

6.0 Process, Quality and Higher Education

Management of quality in higher education is not a one-time activity but it is a regular and never-ending process (Nimbalkar, 2013). Institutions and regulatory bodies have placed significant emphasis on implementing measures to improve the overall educational experience and outcomes for students. The comprehensive assessment process deployed by NAAC captures multiple facets of institutions, encompassing curriculum development, research and innovation, infrastructure, student support, governance, and leadership. It urges HEIs to continually upgrade their curricula to align with the evolving needs of students and industry demands. The assessment also calls for a research-oriented atmosphere, availability of modern infrastructure, and support services for students. Institutions that embrace best practices and innovative initiatives to enhance the quality of education are duly recognized. The NAAC assessment thus acts as a catalyst, motivating institutions to strive for excellence and contribute to the holistic advancement of higher education in India. (NAAC Institutional Accreditation Manual for Self-Study Report Universities, 2019)

The NIRF (National Institutional Ranking Framework) framework in India places a strong emphasis on quality improvement measures in higher education. It evaluates institutions based on parameters such as teaching and learning resources, research and professional practices, graduation outcomes, and outreach and inclusivity. The framework encourages institutions to enhance their teaching methodologies, research capabilities, infrastructure, and student support services. It promotes transparency and accountability in higher education and motivates institutions to strive for excellence. The NIRF framework serves as a catalyst for quality improvement in higher education by recognizing and rewarding institutions that prioritize and implement measures to enhance the overall quality of education provided to students in India. (A Methodology for Ranking of Universities and Colleges in India – NIRF)

Additionally, the Rashtriya Uchchatar Shiksha Abhiyan (RUSA) has played a significant role in improving the quality of higher education in India. RUSA provides financial assistance to institutions for infrastructure development, faculty recruitment, research projects, and quality enhancement programs. By promoting autonomy, improving governance, and strengthening academic and administrative systems, RUSA has facilitated a comprehensive improvement in the quality of education.

Chadha (2013) has identified nine independent factors leading to satisfaction of international students in India, namely Faculty, Administrative Support, Campus Facilities & Upkeep, Understanding, Cost, Course Conduct, Resource Adequacy, Utilities Support and Safety & Security. She is of the opinion that that overall satisfaction of international students studying in India is most significantly determined by the four factors – Faculty, Cost, Understanding and Safety and security. In this regard of developing internal qualities, the New Education Policy 2020 in India has the potential to lead to significant improvements in quality assurance in higher education. The policy focuses on several key aspects that contribute to enhancing the quality of education. It emphasizes the importance of outcome-based learning, interdisciplinary approaches, and the integration of technology in teaching and learning processes. The policy also encourages the establishment of autonomous and research-oriented institutions and promotes faculty development programs to enhance teaching and research capabilities. Additionally, the policy emphasizes the need for accreditation and quality assessments, aiming to strengthen the quality assurance mechanisms in higher education institutions. By providing a comprehensive framework and guidelines, the new Education Policy 2020 aims to ensure that higher education institutions in India prioritize quality and continuously strive for excellence. (National Education Policy, 2020)

These measures collectively aim to raise the standards of higher education in India. By focusing on quality improvement, institutions can provide students with a well-rounded education that equips them with the knowledge, skills, and competencies needed to thrive in a dynamic and competitive global environment. The continuous efforts to enhance quality in higher education will contribute to the overall development and growth of individuals, society, and the nation as a whole. A need is felt to capitalise on the rise of development of Communication technologies including multimedia and ICT enabled technologies to drive Higher Education in the country forward. Solanki (n.d.) has found that quality of higher education can improve considerably through an extensive and optimal use of audio-visual technologies and internet networks. The courses should be so designed that the use of these technologies is made an integral part of the teaching programmes and classroom activities to supplement and strengthen the learning facilities for students.

In a study related to the implementation of the Total Quality Management principles in Higher education institutions in Hyderabad and Karnataka region, Shruthi (2018) has highlighted vital responsibilities of the management of these institutions. Concentration on value added courses, special coaching classes, research performance of faculty members, development of infrastructure of the institutions are among the key areas of concern which the researcher feels needs utmost attention. In another study carried out for determining the parameters of quality in Higher Educational Institutes of Assam, Roy (2021) has identified two different sets of factors from the perspectives of students and faculty respectively and found that both sets of factors have equal impact on the overall satisfaction level of both the stakeholders. The factors from the students' perspectives included Faculty Credentials, Course Delivery, Campus Facilities, Congenial Learning Environment, Feedback and Improvement, Top Management Commitment, and Cost of Education. Similarly, the factors identified from the perspective of faculty included Leadership, Policies and Procedures, Employee Involvement, Reward and Recognition, Campus Facilities, Training & Development, and Feedback and Improvement. These findings highlight the significance of quality of infrastructure and role of management of educational institutions towards enhancing overall satisfaction and quality in their educational offerings. These efforts, initiatives, and research endeavours have played a pivotal role in shaping academic benchmarks, enhancing infrastructure, promoting faculty development, and elevating research outcomes.

7.0 Higher Education Imperatives

a) Process Mapping

Process Improvement in general and Process mapping in specific, can play a crucial role in higher education to improve quality. This can be achieved by providing a visual representation of the various processes and workflows involved in delivering educational services by these institutions. By mapping out the steps, inputs, outputs, and interactions within each process, institutions can gain a clear understanding of how activities are currently performed and identify areas for improvement. Process mapping shall enable higher education institutions to streamline and standardize their processes, identify bottlenecks or inefficiencies, and implement targeted improvements. It will allow for the identification of redundant or unnecessary steps and facilitates the identification of opportunities for automation or technological interventions. Through process mapping, institutions can enhance communication and collaboration among different departments and stakeholders, ensuring a smooth flow of information and resources. It also enables institutions to measure and monitor key performance indicators (KPIs) to assess the effectiveness and efficiency of their processes. Overall, process mapping in higher education possesses enormous potential to empower institutions to make informed decisions, optimize their operations, and continually enhance the quality of education and services they provide to students.

b) Role of Technology

In the 21st century, Technology is playing a crucial role in taking higher education to the masses, driving quality improvement through various avenues. One of the growing areas is the use of Information and Communication Technology (ICT) enabled technologies. These technologies encompass a range of tools and platforms that facilitate online learning, communication, and collaboration. ICT enables the delivery of educational content in innovative ways, such as interactive multimedia presentations, virtual laboratories, and immersive simulations, enhancing student engagement and understanding. It also enables the creation of online learning platforms and Learning Management Systems (LMS), which provide students with access to course materials, assignments, discussion forums, and assessment tools. This allows for flexible and self-paced learning, facilitating personalized learning experiences.

Massive Open Online Courses (MOOCs) and Open Educational Resources (OERs) are another significant contribution of technology to higher education. Open to a large number of participants worldwide, they provide high-quality educational content from prestigious institutions, allowing learners to access courses on a wide range of subjects. MOOCs promote lifelong learning, as individuals can acquire new skills and knowledge at their own pace. OERs foster collaboration and sharing among educators, enabling the development of diverse and up-to-date educational resources.

Use of digital communication tools shall enable real-time interaction and collaboration, overcoming geographical barriers and foster a sense of community among learners. Furthermore, technology shall enable data-driven decision making in higher education. Learning analytics and educational data mining tools are helping institutions gather and analyze data on student performance, engagement, and learning patterns. This information can be used to identify areas for improvement, personalize learning experiences, and provide timely interventions and support. Embracing technology in higher education can lead to improved quality, engagement, and outcomes for students and educators alike.

c) Commitment of Management

According to Semenets et al. (2021), ensuring the quality of the educational process of higher education is an integral and key factor in training a qualified and in-demand specialist in the labour market. Ensuring the appropriate level of quality of the educational process is not possible without institutional support at the level of society and the state.

The findings of the research work as stated in the earlier sections indicate that commitment of management in higher educational institutes can play a crucial role in improving quality. When the management is committed to quality, it sets the tone for the entire institution and creates a culture of excellence. Their commitment reflects in various aspects, such as resource allocation, faculty development, infrastructure enhancement, and student support services. A committed management team shall ensure that adequate resources are allocated for the implementation of quality improvement measures. Prioritizing faculty development programs, providing opportunities for professional growth and staying updated with the latest trends in education, investing in upgrading infrastructure and facilities to create a conducive learning environment are some of the ways which can lead the way. By demonstrating a strong commitment to quality, the management shall inspire and motivate the entire institution to strive for continuous improvement and deliver a high-quality education to students.

8.0 Managerial Perspectives

The concept of total quality is different from that of product quality. Its approach towards quality is in all its forms – in people and processes, in products and costs, in planning and management (Naik, 2000). In today's dynamic and competitive business environment, organizations strive to deliver high-quality products and services while maintaining efficiency and effectiveness. The managerial perspective on process mapping focuses on streamlining and standardizing processes, identifying areas for improvement, and implementing targeted enhancements. Managers need to recognize the importance of visualizing and understanding the workflows involved in delivering educational services. They must prioritize identifying bottlenecks, inefficiencies, and redundant steps to drive efficiency and productivity. Managers must also emphasize the role of automation and technological interventions to optimize processes. In his study for identification of critical process variables and pillars for successful organisational change and development, Thakur (2020) has identified Organisational Structure, Financial Oversight & Management Vision, and Mission as the most crucial pillars.

Administrators in higher education must also recognize the transformative power of technology. Use of ICT-enabled technologies to enhance the learning experience and improve quality, must be stressed upon. They should explore leveraging of interactive multimedia, virtual laboratories, and immersive simulations to enhance student engagement and understanding. Use of digital communication tools to enable real-time interaction and collaboration should be promoted. Moreover, data-driven decision-making by leveraging learning analytics and educational data mining tools to gather and analyse data on student performance, engagement, and learning patterns may be looked at.

There are several process variables / components related to top management of HEIs such as Strong Leadership with Clear Vision and Strategic Direction. Training and development improve performance of the individual, group and organization as a whole (Goldstein & Ford, 2002). In recent years, organisations are giving sizeable importance for capacity building of the human resources. 'Skills erode and become obsolete over a period of time which is required to be replenished continuously. Hence, training and development is very vital at all employee levels' (Nishtha & Amit, 2010). In educational context, it is pertinent at all levels – academic, non-academic, and other academics.

It is observed that modular approach for implementing different OD initiatives like Quality Management System, Total Productive Maintenance, Quality Circle, Reengineering, Enterprise Resource Planning (ERP), etc. incorporates training as an important tool. Successful design and implementation of training package may contribute significantly for achieving excellence in HEIs.

9.0 Conclusion

The importance of process elements and quality in higher education has significantly increased over the decades. As societies have become more knowledge-driven and competitive, the demand for high-quality education has grown exponentially. Students and employers alike seek institutions that provide relevant, rigorous, and innovative programs. Additionally, advancements in technology and globalization have expanded access to education, necessitating a focus on quality to ensure equitable opportunities for all. The recognition of the impact of education on individual development, social progress, and economic growth has further heightened the significance of quality in higher education. Accreditation bodies, rankings, and policy frameworks have emerged to evaluate and measure quality, promoting accountability and improvement in institutions. Moreover, the evolving needs and expectations of students, along with the changing landscape of industries, require higher education to adapt and continually enhance its quality standards. As a result, institutions, policymakers, and stakeholders are increasingly investing in quality improvement initiatives, adopting innovative approaches, and embracing new technologies to deliver excellence in higher education. By prioritizing quality and adopting process improvement strategies, higher education institutions can prepare students for the challenges of the future, contribute to societal development, and maintain their relevance in an ever-evolving educational landscape.

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