Al Ameen College, Edathala
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Proceedings of NAAC Sponserd 2 day National Seminar on

Quality Enhancement & Sustainability in Higher Education Institutions

7 & 8 February 2023

Organized by
IQAC, Al Ameen College, Edathala

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2-day NAAC Sponsored National Seminar on

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Internal Quality Assurance Cell

Organized by

Internal Quality Assurance Cell (IQAC)

Al Ameen College, Edathala

2-day NAAC Sponsored National Seminar on

Quality Enhancement & Sustainability in Higher Education Institutions

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Concept Note:

The higher education system in India is the place where the future generation of the country is molded. The major hassle faced by higher education institutions is quality crisis. Quality is the ability to satisfy requirement while sustainability is the ability to do so over time. Quality leads to sustainability. A transformation of education from teacher centric to learner centric will be a major stepping stone towards quality enhancement. The National Education Policy 2020 draws attention to the development of creative imagination based on the principle that education must expand cognitive aptitude including literacy and numeracy. In other words, the focal point of NEP is promoting critical thinking and problem solving along with social, ethical, and emotional dispositions, keeping in mind the rich heritage of ancient Indian knowledge.

Education needs to adopt a more holistic, integrated, experience-focused, inquisitive, discovery-driven, learner-based, flexible, and enjoyable approach to develop all aspects and capabilities of the learners. Education needs to be more well-formed, practical, functional, and constructive for the learner to help promote ethics and values like coherence, compassion, and concern while preparing them for desired employment. The existing state of learning and the required state of learning still demands major reforms in the quality and integrity into the education system from early stages and throughout higher education, regardless of the learner's social or economic background.

Seminar Themes:

- Reforms in Higher Education Sector
- Awareness about application of NEP in Higher Education Institutions
- Knowledge sharing platform with regard to exchange of innovative and creative ideas to enhance quality.
- Quality parameters for Higher Education Institutions
- Role of teachers to ensure quality parameters
- Impact of assessment and evaluation to improve quality standards
- Gross Enrolment Ratio in Higher Education
- Sustainability in quality
- Skill based education
- Learner Centric Approach
- Multiple exist programme
- Academic Bank of Credits
- Digitalization in Education sector
- Sustainable education practices in India
- The role of teachers for quality education in light of NEP 2020
- Gross Enrolment Ratio (GER) in Higher Education

TWO DAY NATIONAL SEMINAR ON 7th & 8th FEBRUARY, 2023

Theme: Quality Enhancement & Sustainability in Higher Education Institutions

PROGRAMME SCHEDULE

DAY: 1 7th February, 2023

Prayer	:	Silent Prayer
Welcome	:	**Dr. Leena Varghese** (IQAC Coordinator)
Presidential Address	:	**Prof (Dr.) Cini Kurian** (Principal)
Inaugural Address	:	**Prof (Dr.) C T Aravindakumar** (Pro Vice-Chancellor, Mg University)
Key Note Address	:	**Dr. Leena Gahane** (NAAC Deputy Advisor)
Felicitation	:	**Dr. Junaid Rahman** (Manager)

TEA BREAK

TOPIC: Assessment and Accreditation Methodology in Revised Accreditation Framework

TECHNICAL SESSION 1	:	**Dr. Bhalchandra M Hardas** (Asst. Professor, Shri Ramdeobaba College of Engineering and Management, Nagpur

TOPIC: Curriculum Restructuring

TECHNICAL SESSION 2	:	**Dr. Ramachandran** (Advisor, India – Africa Institute of Educational Planning & Administration – IAIEPA)

LUNCH BREAK

TOPIC: Sustainability in Imparting Quality Education

TECHNICAL SESSION 3 : **Dr. Shakila T Shamsu**
(Formerly Officer on Special Duty, Dept. of Higher Education, Govt. of India)

TECHNICAL SESSION 4 : **Paper Presentations**

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DAY: 2 8th February, 2023

TOPIC: Higher Academic Culture and NEP

TECHNICAL SESSION 5 : **Dr. Sebastian Joseph**
(General Secretary, Kerala History Congress)

TOPIC: Role of Teachers in Ensuring Quality Parameters

TECHNICAL SESSION 6 : **Dr. Baby Shary**
(Professor Dept. of Psychology,University of Calicut)

LUNCH BREAK

TOPIC: Skill Based Education

TECHNICAL SESSION 6 : **Dr. Sujatha B Hanchinalkar**
(Regional Institute of Education, Mysuru)

Valedictory function

Principal's Message

Dr Cini Kurian
Principal,
Al Ameen College, Edathala

The Higher Education Institutions play a significant role in beading the young generations towards national development. The teaching learning process has taken a vibrant turn during the pandemic, no one ever thought of turning their own homes into classrooms. Quality Enhancement and sustainability has turned out to be the buzz words and education sector is in the pathway of undergoing tremendous changes. There is a great need to empower teachers to take up the new role envisaged in the curriculum restructuring and NEP 2020. The efforts taken by IQAC in organising a National Seminar on Quality Enhancement and Sustainability in Higher Education Institutions is a commendable one. This seminar will throw open deliberations among teaching faculties of diverse disciplines around the country about Quality parameters and sustainable measures in teaching learning activity. The expert deliberations will be a guiding spirit to take up new initiatives and challenges in implementing NEP 2020 in Higher Education Institutions.

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KEY NOTE ADDRESS

Assessment and Accreditation Methodology in Revised Accreditation Framework

Dr. Bhalchandra M Hardas

(Department of Electronics Engineering

Shri Ramdeobaba College of Engineering and Management, Nagpur)

The UGC (University Grants Commission) has mandated NAAC by 2022. It shows the spotlight NAAC is in as of late. NAAC accreditation is the qualified benchmark for educational entities. Hence NAAC has put up a standardized procedure along with a self-study report that boils down to gaining excellence for institutions.

Vision and Mission

The vision of NAAC is:

To make quality the defining element of higher education in India through a combination of self and external quality evaluation, promotion and sustenance initiatives.

The mission statements of the NAAC aim at translating the NAAC's vision into action plans and define NAAC's engagement and endeavor as given below:

- To arrange for periodic assessment and accreditation of institutions of higher education or units thereof, or specific academic programmes or projects;
- To stimulate the academic environment for promotion of quality in teaching-learning and research in higher education institutions;
- To encourage self-evaluation, accountability, autonomy and innovations in higher education;
- To undertake quality-related research studies, consultancy and training programmes, and
- To collaborate with other stakeholders of higher education for quality evaluation, promotion and sustenance.

The accreditation framework of NAAC is thus based on five core values detailed below.

(i) **Contributing to National Development**

(ii) **Fostering Global Competencies among Students**

(iii) **Inculcating a Value System among Students**

(iv) **Promoting the Use of Technology**

(v) **Quest for Excellence**

Revised Assessment and Accreditation (A&A) Framework

The Revised Assessment and Accreditation Framework was launched in July 2017. It represents an explicit Paradigm Shift making it ICT enabled, objective, transparent, scalable and robust. The Shift is:

- From qualitative peer judgement to data based quantitative indicator evaluation with increased objectivity and transparency
- Towards extensive use of ICT confirming scalability and robustness
- In terms of simplification of the process drastic reduction in number of questions, size of the report, visit days, and so on
- In terms of boosting benchmarking as quality improvement tool. This has been attempted through comparison of NAAC indicators with other international QA frameworks
- Introducing Pre-qualifier for peer team visit, as 25% of system generated score
- Introducing *System Generated Scores* (SGS) with combination of online evaluation of Quantitative metrics and peer judgementof Qualitative metrics.
- In introducing the element of *third party validation* of data
- In providing appropriate differences in the metrics, weightages and benchmarks to universities, autonomous colleges and affiliated/constituent colleges
- In revising several metrics to bring in enhanced participation of students and alumni in the assessment process

The Revised Assessment and Accreditation Framework was launched in July 2017. It represents an explicit Paradigm Shift making it ICT enabled, objective, transparent,

scalable and robust. After launching the same several modifications and updations have been carried.

Recently updation of manual is in line with the NEP-2020 recommendations. Again, in January 2022 metrics related to seven criteria including both Q_nM and Q_lM have been now reduced to ease the Assessment and Accreditation process of NAAC for Affiliated/Constituent Colleges without compromising the quality aspects in Higher Education.

Focus of Assessment

The NAAC continues with its focus on quality culture of the institution in terms of Quality Initiatives, Quality Sustenance and Quality Enhancement, as reflected in its vision, organization, operations and the processes.

Experience has reiterated that these can be ascertained either by on site observations and/or through the facts and figures about the various aspects of institutional functioning.
The Revised Manual places greater confidence in the latter as reflective of internal institutional processes.

In line with NAAC's conviction that quality concerns are institutional, Quality Assessment (QA) can better be done through self-evaluation. The self-evaluation process and the subsequent preparation of the Self-Study Report (SSR) to be submitted to NAAC involves the participation of all the stakeholders – management, faculty members, administrative staff, students, parents, employers, community and alumni.

While the participation of internal stakeholders i.e. management, staff and students provide credibility and ownership to the activity and could lead to newer initiatives, interaction with the external stakeholders facilitate the development process of the institution and their educational services.

Overall, the QA is expected to serve as a catalyst for institutional self-improvement, promote innovation and strengthen the urge to excel.

Quality Indicator Framework (QIF) – Description

The criteria-based assessment forms the backbone of A&A process of NAAC. The seven criteria represent the core functions and activities of a HEI. In the revised framework not only the academic and administrative aspects of institutional functioning but also the emerging issues have been included.

In the past few years, the government has taken several initiatives to enable more students to access primary and higher education. The pandemic may be a setback, but the New Education Policy has brought various reforms and initiatives to benefit the Indian education system and the Indian students in the long term. The Revised Assessment and Accreditation Framework is also a step towards a better education system.

It aims to transform the Indian education system by making it ICT-enabled, transparent, scalable, and robust. The NAAC accreditation guidelines outline higher education institutions' criteria to be eligible for their endorsement.

What's changed in the Revised Accreditation Framework (RAF) for NAAC assessment and accreditation

Reducing the dependency on qualitative peer judgment wherever possible and replacing it with quantitative evaluation based on actual data. The shift to quantitative assessment aims to improve objectivity and transparency in the NAAC accreditation process.

Increased use of information and communication technology in the learning process to make the education system scalable and robust.

Simplifying the assessment and accreditation process by reducing the number of questions, size of the reports, number of visit days, etc. Establishing benchmarks using NAAC indicators to improve the quality of education offered in India's higher education institutions. Benchmarks have been created using international QA frameworks.

Introducing system-generated scores (SGS) combined with online evaluation (70%) and peer judgment (30%) Only those institutions that fulfil the pre-qualifying criteria

by scoring at least 30% of the system generated score will be eligible for a peer team visit.

Introduced third-party validation of the data presented in an institution's application.

Providing the appropriate differences in metrics, weights, and benchmarks to universities, autonomous colleges, and affiliated/constituent colleges.

Revising various metrics to help improve the participation of students and alumna in the assessment process.

On a more extensive level, the NAAC rounds off its certification in three levels:

- IIQA (Institutional Information of Quality Assessment) and SSR (Self Study Report)
- DVV (Data Validation and Verification) and SSS (Student Satisfaction Survey)
- Onsite assessment, expert examination by visiting teams

The NAAC Accreditation Process

1. Registration on the official NAAC website– To proceed for registration with NAAC, the very first step is to create a profile for your institute.
2. What is AQAR? What is its role in NAAC accreditation?
3. IIQA (Institutional Information of Quality Assessment) in the NAAC accreditation process
4. SSR submission as part of NAAC
5. DVV (Data Validation & Verification) and pre-qualifier score
6. The SSS (Student Satisfaction Survey)
7. Onsite visit by NAAC
8. NAAC announcement of Institutional Grading

ASSESSMENT OUTCOME

The final result of the Assessment and Accreditation exercise will be an ICT based score, which is a combination of evaluation of qualitative and quantitative metrics. This will be compiled as a document comprising three parts.

PART I - Peer Team Report

Section 1: Gives the **General Information** of the institution and its context.

Section 2: Gives Criterion wise analysis based on peer evaluation of qualitative indicators. Instead of reporting with bullet points, this will be a **qualitative, descriptive assessment report** based on the Peer Team's critical analysis presenting strengths and weaknesses of HEI under each Criterion.

Section 3: Presents an **Overall Analysis** which includes Institutional Strengths, Weaknesses, Opportunities and Challenges.

Section 4: Records **Recommendations for Quality Enhancement of the Institution** (not more than **10** major ones).

ASSESSMENT OUTCOME

PART II –

Graphical representation based on Quantitative Metrics (Q_nM)

This part will be a **System Generated Quality Profile** of the HEI based on statistical analysis of quantitative indicators in the NAAC's QIF (quality indicator framework). Graphical presentation of institutional features would be reflected through synthesis of quantifiable indicators.

ASSESSMENT OUTCOME

PART III - Institutional Grade Sheet

Contains the Institutional Grade Sheet which is based on qualitative indicators, quantitative indicators and student satisfaction survey using existing calculation methods but it will be generated by a software.

The above three parts will together form "NAAC Accreditation Outcome" document. It is mandatory for the HEIs to display it on their institutional website apart from NAAC hosting it on its website.

Calculation of Institutional CGPA

The CGPA will be calculated based on the scores obtained from the three sources, viz., The System Generated Scores (SGS) of the quantitative metrics, the scores from the qualitative metrics includes critical appraisal by the Peer Team through on site visit and the scores obtained on the Student Satisfaction Survey. These will be collated through an automated procedure based on 'benchmarks' and assessed on a five-point scale, viz., (0, 1, 2, 3 & 4).

New Initiatives by NAAC

- SSR Mock test form is launched for the benefit of colleges in the HEI portal. Through sample SSR form HEI can understand the actual process of SSR filling and analyse the performance of quantitative metrics after submitting the test form.
- Integration of NEP 2020 Guideline in the A& A Process (Institutional Preparedness For NEP)
- Exclusive and Specialized Manuals
- Institutional Initiatives for Electoral Literacy
- Margadarshan – Mentor- Mentee Scheme

Skill Based Education

Dr Sujata B Hanchinalkar

(Department of Education, Regional Institute of Education, NCERT, Mysuru)

Today skill-based education is not a choice but a need in India. The irreconcilable difference in our country is that while the demand for skilled professionals is quite high, the desire to get skilled is considerably low. Pure academic subjects are always more popular with learners, parents and society as socially acceptable qualifications. Most youth in the country still incorrectly believe that skill-based education leads to low paid jobs and it is perceived to be meant for only academically weak students.

India's education system is also characterized by a high 'school dropout rate', with as many as 56.8 per cent students leaving school before reaching the qualifying examination of 10th standard. There is a definite need for skill development to be brought to the forefront to enable this section of society to become employable.

The National Education Policy 2020 emphasises practical, hands-on skilling rather than classroom-based learning. India has been grappling with challenges like unemployment and graduates who are unemployable and lack soft skills. Despite having a wide pool of talent, many youngsters are unable to find jobs due to a lack of the required skill sets.

What we need is to understand the difference between skill-based and knowledge-based education. The latter involves understanding concepts whereas the former aims to channelise education into a practical form to find solutions. It is the second that many companies want. They are looking for talented people who can innovate, are open to learning and re-learning, can apply their knowledge practically and will also upskill themselves.

According to consulting firm McKinsey, around 69% of companies globally are focussing on skill-building and more than 50% believe that the pandemic and the challenges it threw up have increased the demand for a multi-skilled workforce. According to an Accenture report titled Fueling India's skill (R)evolution, the country could lose 2.3% of its annual growth by 2028 if skill-building is not on par with modern technological interventions.

Imparting technical skills is something most training institutes do well. Many ITIs today harness technologies like smart classrooms, blended learning and MOOC as mechanisms to share resources and course elements like practicals that cannot be easily replicated. The National Programme on Technology Enhanced Learning (NPTEL) from the Ministry of Human Resource Development (MHRD), is no longer just about disseminating engineering courses of the IITs. The programme has assembled more than 950 courses comprising 30,000+ video hours, many of which are being usefully harnessed as a massively online open course resource by technical training institutes. Even at the school level, the Ministry of Human Resources (MoRD) has rolled out the Centrally Sponsored Scheme (CSS) of implementing Vocationalisation of Higher Secondary Education (VHSE). This is similar to the German system of dual TVT.

Affirmative steps have been taken to vocational schools. With 'Catch them young' mantra, VHSE Scheme has mandated to add vocational education as a subject from class IX onwards till XIIth. The job roles comply with National Skills Qualifications Framework. Skilling is imparted by a professional trainer and Centum Learning is playing a pivotal role in the implementation of vocational education in more than 1150 schools across 15 states, where it has successfully trained more than 85,000 students. The novel training intervention includes face-to-face classes by professional trainers, practical classes, field visits/ industry visits, guest lectures, preparation of models/ charts/ projects, preparation of student portfolios and role-plays. Skilling students at UG level, the novel approach to introduce B.Voc Bachelors in Vocational Degree, is largely targeted towards youth who want to enhance their employability by mastering their field of work. Centum has become a key implementation partner, working with Government of Himachal Pradesh to conduct work-integrated B.Voc courses for students who have completed their XIIth standard or equivalent.

According to the India Employment Report 2016 issued by the Institute for Human Development (IHD), India will need to create at least 1.6 crore jobs over the next 15 years to come close to a point where there is neither surplus labour nor unemployment. Skilling needs an active education-industry partnership. Industry can play a very important role by quickly adopting schemes like an apprenticeship or setting aside some

CSR budgets for skilling for youth. India can grow only if India is Skilled. For a skilled India, all the stakeholders need to work closely to make this dream come true.

KEY IDEAS ABOUT SKILLS BASED LEARNING

What does a good education give you? A store of useful facts needed for navigating the world of work? A set of flexible skills to manage change in an uncertain future? Educationalists and politicians argue to and fro between knowledge and skills. Truth be told a good education gives you both: one (knowledge) giving the other (skills) contexts to develop.

Research from NTL indicates that learners remember more effectively when they can use skills to access, process and express their knowledge. Findings indicate that teaching and assessing someone else is deemed more effective than listening to a lecture (though of course we do need to get the knowledge in the first place before we can teach it to someone else). If this is true then it's a good rationale for skills based learning: teaching and assessing one another needs planning, group work, creativity, enquiry, evaluation and self-confidence. Listening to a lecture calls on only listening and maybe note-making.

Skills-based learning provides classroom environments where independence, thinking skills, collaboration and active learning are developed at the same time as knowledge is acquired.

There is a very small yet very significant change in mindset needed if you want to be a skills-based educator. Traditionally we teachers look at our knowledge curricula then choose activities we think will best pass on that knowledge, The activities happen to require certain skills.

In India, skill-based education is considered to be a vocational skill that is obtained through short-term training or courses not part of the formal education sector and which provides employment in informal sectors. Such skills are also a part of the government’s Pradhan Mantri Kaushal Vikas Yojna (PMKVY) scheme, which aims to promote recognition and standardisation. However, expertise needs to be developed in the formal learning system as well.

When the Indian economy opened to the outside world through liberalisation and globalisation, it created a great demand for graduates with skill across vital industries, which led to a huge race to secure more marks and more degrees. After the internet and mobile revolution, job-seekers in the formal sector saw new opportunities to learn necessary skills from the internet and through internships prior to a full-time job. The reliance on formal education to obtain job-ready skills saw a slow decline.

The current Covid-19 pandemic has advanced the use of local products and has helped people recognise the importance of a skill-driven society. Being a young nation with 75% of the population in the working age, employment becomes a major concerns. With the help of schemes such as Recognition of Prior Learning (RPL), the students can receive both security and benefit as it aids in an equivalent acknowledgement of both informal and formal learning.

The students are the human capital of the country and it is essential to empower them for the development of the economy. Some of the benefits of skill-based education include:

1. Skill-based education places the ownership of learning in the hands of the students and helps them restrict the big gap of understanding. The assessment demonstrates their competency rather than grades and the education process is a great boon for drop-outs, as they can easily move ahead without a gap.
2. It scintillates creativity along with critical thinking, making the learners analytical. It focuses more on synthesis, evaluation and application of the learnt facts.
3. Skill-based education is definitely more effective and purpose-driven, which helps the students receive a clear objective along with a vibrant culture. It is a perfect mixture of opinions, values and routine to form a solid foundation. It promotes and develops the art of learning and development hence empowering the students to become successful in their chosen field.
4. It promotes synergetic problem solving. The students learn how to work in a constructive manner to solve problems in a collaborative manner. Skill-based learning helps to integrate the learners with real life experiences and promotes effective communication skills: oral and written, in situational contexts, unknowingly enhancing the relevance and appropriateness in their behaviour patterns.

5. It also ‘hones leadership’. The skill-based education helps the students become altruistic, chivalrous and gracious. Through activities and events, the students build adroitness that helps them listen, organise and inspire the team, thereby building leadership qualities in them.

Several educational reforms in form of continuous and comprehensive evaluation, age-appropriate admission, and focus on activity-based learning have been introduced at the elementary level, yet rote learning and periodic pen and paper test are still being practised in schools. The children have little opportunity to ask questions in the classroom, discuss among themselves and took participation in debates.

In some schools it has been found out that instead of removing social stereotypes and beliefs such as caste system and discrimination against girl child are being strengthened and nurtured. In such a situation, it’s doubtful whether campaigns like Make in India and Skill India will be successful.

The need of the hour is that the teachers themselves be aware of all these and go ahead and try to remove existing flaws in the education system. It is evident that there are many obstacles in the path, and it’s very daunting to achieve the goal. But one step at a time will make the journey happen. If the teacher comes forward and asks for help, rest assured, there are many people and organisations who are more than happy to help them and undertake all possible measures to make their journey smooth.

Skill-based education guides the students where to look, doesn’t limit their world to what to see and so it is the true celebration of inquisitiveness of future seekers of the Millennium.

Bridging the gap

While our higher Education System is currently undergoing several changes, the growing need for seamless coordination of a classroom-based curriculum and practical skills-based learning demands that our institutions and academicians begin designing a different kind of curriculum that focuses on research, development, and training.

This can be achieved through the following means:

Industry-Academia partnership - A strong collaboration with the industry to impart skilled courses to students will be essential. Higher education institutions (HEIs) must bring in experts from the industry to their laboratories so that students are aware of the

developments on the ground. Regular seminars and classes and internships and on-the-job training/ live projects are also excellent ways to learn the industry's inner workings. Over time, this will allow academia to update existing learnings with newer methodology and ensure an advanced pedagogy.

Government-academia partnership: The government can help institutions by providing the appropriate infrastructure required for advanced labs and research and development wings. A collaboration between the government and HEIs with regard to apprenticeships and incentives will help students get sufficient experience before they make their debut in the real world.

Why implement the skill-based learning method?

Skill-based learning is about planning, implementing and analysing skills gained through knowledge-based learning method. Students are motivated to think logically, analyse concepts and apply their insights. The idea behind this innovative and most in-demand learning method is to develop learners into independent thinkers and prepare them for the challenges in the future. Here are the reasons to implement the idea of skill-based education in universities.

Sparks creativity – Helps students in learning how to be independent and approach problems in a creative way. It gives a way to move beyond traditional methods and think innovatively.

Develops critical thinking – Enables students to hone analytical and critical thinking skills in all the courses. It is a way to avoid rote learning and focus more on synthesising, evaluating, and applying facts and ideas on your work. The sessions on entrepreneurship help students to anticipate problems and devise solutions accordingly.

Enhances collaborative problem solving – Students learn how to work in a constructive manner to solve problems in a collaborative manner. Skill-based learning helps in drawing enhancing strengths and important skills to achieve their goals. While organising an event or a field-based activity, students work as a team to deliver the desired results.

Builds effective written and oral communication – Building effective communication skills whether it is oral or written should be an integral part of the

curriculum. Engaging students in articulate discussion, active listening and presentation skills help in exercising their communication skills.

Hones leadership – Another advantage of introducing skill-based learning in classrooms is to develop effective leadership skills in students and help them see beyond their self-interests. Through activities and events, students build skills that help them to listen, organise and inspire the team.

Reference

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CONTRIBUTORY PAPERS

Quality Parameters and Assurance in Higher Education

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Abstract

The concept of "quality in education" is an immensely significant concern for academicians and academia globally, and lately this notion has also treaded the realm of Higher Education. It is an accepted fact that there are a number of factors responsible for assuring quality in education both internal and external to an institution. Harvey (1995) defined five interrelated concepts of quality: exceptional (***excellence***); perfection (or ***consistency or flawless outcome***); fitness for purpose (***fulfilling a customer's requirements***); value for money; and transformation. This paper presents a theoretical framework the concept of Quality in Higher Education by identifying the parameters which are central contributors towards quality of an academic institute of higher learning. The descriptive study identifies and explains these parameters, including Higher Education policies and practices, curriculum, faculty KSA, institutional design and strategy, institutional leadership, learners' profile, resources, open-system thinking and change, and the sub factors in each parameter of context.

Introduction

The need for addressing the issue of Quality in higher education is confronted time and again when teaching and testing, while admitting and passing out students, in carrying out academic and administrative activities whether general or professional university in the public or private sector. The need to enhance the quality of higher education is strongly felt when the students are seen struggling in the global workforce market, professions and technical fields operating with compromised paper attempts to present a framework that identifies core factors that induce quality in higher education. These factors are seen as contributing towards quality assurance of an academia.

Analysis of the research findings on quality in education in quality assurance as well as best practices formulate the bases for identifying important parameters which constitute the notion of quality. This quality framework sees eight key components responsible for driving the quality attribute of an academic institution

Method

A. Octet of Quality in Higher Education: Framework for Quality

The need for addressing the issue of Quality in higher education is confronted time and again when teaching and testing, while admitting and passing out students, in carrying out academic and administrative activities whether general or professional university in the public or private sector. The need to enhance the quality of higher education is strongly felt when the students are seen struggling in the global workforce market, professions and technical fields operating with compromised professionalism and excellence resulting in creating obstacles to national growth and prosperity. This paper attempts to present a framework that identifies core factors that induce quality in higher education. These factors are seen as contributing towards quality assurance of an academia. Analysis of the research

findings on quality in education in quality assurance as well as best practices formulate the bases for identifying important parameters which constitute the notion of quality. This quality framework sees eight key components responsible for driving the quality attribute of an academic institution. Due to the eight factors the model is termed as Octet of Quality for HE

Octet of Quality: Factors instrumental in Quality Assurance of an Academia

B. Higher Education policies and practices

Quality in education has to be the fundamental concern of all those involved with this activity and whatever happens within this domain as the act of academia. This is only possible if this characteristic is not left at the discretion of the individuals but it has to be targeted religiously as a matter of principle by the concerned authority. At higher education level, it is then the responsibility of Higher Education Commission to focus on quality as the ultimate objective and to ensure policies and practices that are governed by quality standards. The policies and practices of Higher Education should be in accordance with the global standards and must be considered as the framework and benchmark to all institutions and individuals working within the higher education. Instead of merely acting as a policy making and regulatory body , Higher Education through its policies must provide an umbrella to nurture all other quality factors and the policies should be such as to push forward the existing baseline of current quality standards and not to merely dictate a futuristic intimidating goal. Rather, policies which create a thirst amongst higher education community and a climate within academia to assess available resources, of all with more inward-looking attitude which will ensue in finding solutions to our problems, in harnessing

the indigenous talent and resources, and in becoming self-reliant. The HE policies and practices should be undertaken simultaneously in three areas viz. Physical, policies focusing on the infrastructure; Human Capital, policies towards faculty, administration and staff development; and Intellectual policies for improving research, curriculum etc. Also, while developing policies the academic institutions should be viewed as a dynamic body and

distinctively unique with various interconnected and interdependent components including infrastructure, personnel, instructional resources, programmes, activities etc. Hence, holistic thinking also called systems thinking is needed to really expect quality as an outcome of the framed policies which are to be implemented successful.

Result and Discussions

A. Application of Quality Assurance Processes

The applications of quality assurance processes in higher education are discussed in the literature, yet skepticism prevails on the effectiveness of any one QA model (Asif, Raouf, & Searcy, 2012). One of the reasons for this skepticism could be attributed to the fact that the types of services and the quality frameworks the agencies use vary from one QA organization to another. For example, the Baldrige Program is an affiliate of the National Institute of Standards and Technology (NIST) and it is dedicated to performance excellence. Baldrige administers the Malcom Baldrige National Quality Award. Award recipients must demonstrate achievements and improvements that meet seven categories of the criteria for performance excellence.

B. Accreditation: Quality Assurance of Higher Education Institutions

The results show that coherent control by femtosecond pulse shaping is a promising tool in spectroscopy & microscopy. In microscopy, this technique can be applied to obtain chemically selective images. Apart from its application in spectroscopy, the technique finds application in many areas of physical and chemical sciences such as nonlinear optics, material processing, quantum computing and control of chemical reactions etc.

C. Application of Quality Assurance Processes

The applications of quality assurance processes in higher education are discussed in the literature, yet skepticism prevails on the effectiveness of any one QA model (Asif, Raouf, & Searcy, 2012). One of the reasons for this skepticism could be attributed to the fact that the types of services and the quality frameworks the agencies use vary from one QA organization to another. For example, the Baldrige Program is an affiliate of the National Institute of Standards and Technology (NIST) and it is dedicated to performance excellence. Baldrige administers the Malcom Baldrige National Quality Award. Award recipients must demonstrate achievements and improvements that meet seven categories of the criteria for performance excellence.

Conclusion

Quality in Higher Education is an established notion which is described vividly in terms of desirable characteristics of the activities undertaken, individuals involved, and infrastructure needed. For the higher identified and then consciously manipulating these will allow quality to be induced in the education system in our country. The given framework is an attempt to consciously identify factors that are instrumental in the effective functioning of academia and their success in achieving the main objectives of the educational activity

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Experiential Learning in Higher Education to Promote Problem Solving and Critical Thinking

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Abstract

Experiential learning, a method or approach of engaging the learners in any form of direct experience and focussed reflection, is one of the most acceptable methods of pedagogy to promote critical thinking and problem solving. This approach is different from the usual 'hands-on training' as this 'learning through experience' method involves well identifiable steps of reflection and application. Experiential learning can be either field based experiences or classroom-based experiences, both delineated by the experiencing, reflecting, analysing, generalizing and application. Experiential learning can assist the learners in their chosen careers by reinforcing the content learning by experience. It also ensures holistic development of the learners with better problem solving and decision-making skills. Experiential learning has become an inevitable approach in the teaching learning process and the use of information and communications technology tools can make both field based and classroom based experiential learning more engaging.

Keywords: *Experience, reflection, application, field based, classroom-based experiences*

Introduction

Experiential learning (EL) is a method or approach of engaging the learners in any form of direct experience, either in a field or classroom, and focussed reflection so that the learners can attain better knowledge, skills or values. Here, learning happens through experience, exploration and reflection thereby igniting the problem-solving capabilities

of the learner. This approach needs a deviation from the classroom lecturing and promotes hands-on activities and group discussions. Good lecturing and paving a strong base in the subject is critically important, which can be done in blended or flipped classroom modes, but beyond that there is a pressing need to promote the problem solving capabilities of the learners.

Experiential learning or learning through experience is not a new idea for the college classroom. Well known educational psychologists like John Dewey (1859-1952), Carl Rogers (1902-1987), and David Kolb (b. 1939) have laid the foundation of learning theories concentrating on "learning through experience or "learning by doing." The idea of problem solving and critical thinking based experiential learning was popularised by Dewey and Rogers who find mere memorization and meaningless cognitive learning insignificant in learning process. Kolb, known for his Learning Style Inventory (LSI), also supported experiential learning. What makes learning through experience different is that here learning demands the direct involvement of the learner in the pedagogical approach.

Principles of Experiential Learning

Compared to the rigid and organized teacher centric lecturing-based classroom learning, EL provides more room for flexible, student centric cooperative learning situation. As quoted by Davis, "The focus of EL is placed on the process of learning and not the product of learning" (UC Davis, 2011). The basic factor that differentiates EL from other 'hands on learning' is the steps of reflection and application after experiencing (UC Davis, 2011).

The essential principles of experiential learning are (Association for Experiential Education, 2011)

- EL happens when carefully selected experiences are followed by reflection, critical analysis and application.
- Clearly structured experiences are needed so that the learners can take lead, decide and fins credibility in the results

- The learning process should be dynamic enough to encourage problem solving and critical thinking in the learners.
- EL should guarantee intellectual, physical, social and emotional involvement of learner to the learning task and outcome should ensure the overall development of the learner with the ability for spontaneous remodelling/ readapting, if required.

Process of Experiential Learning

EL involves various stages that offer learner a hands-on, collaborative and reflective learning experience which helps to "fully learn new skills and knowledge" (Haynes, 2007). Learning from 'doing' is the motto of EL even though content learning is also required. The main steps of EL are defined as follows: (Haynes, 2007; UC Davis, 2011) (Fig. 1)

- ***Experiencing***

The learners will carry out a hands-on experience by themselves with minimal or no help from the teacher/ instructor. For example; role playing, model/ product / prototype making, giving a presentation etc.

- ***Sharing/Reflecting***

The learners reflect on 'what happened' to their peers and discuss their observations in a group. This helps in identifying the significance of their own results and relates it to the past experience.

- ***Processing/Analyzing***

Learners analyze their result to identify 'what is important?' and how the results can be related to future learning experience or how it can address specific issues. This should assist the learners in identifying the outcome of their experience.

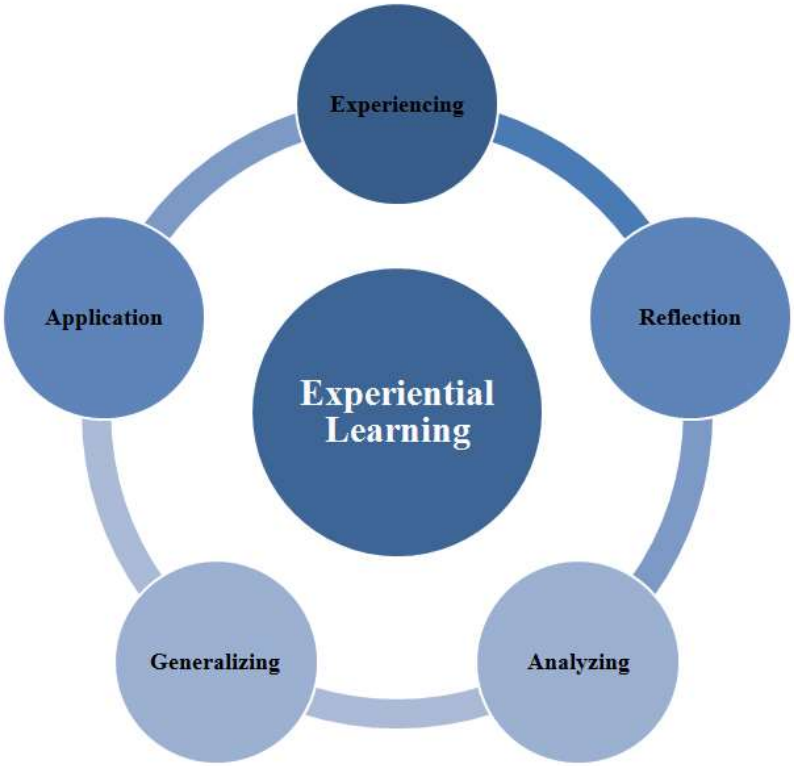
- ***Generalizing***

Learners connect their experience to find general trends or common pattern to address real life issues.

- ***Application***

The learners should be able to identify how the newly learned process can be applied to a different situation or in any future situations.

Fig 1: Schematic representation of various steps in Experiential learning



Experiential Learning in Higher Education

Various experiential learning modalities are identified in higher education sector. It can be brodly categorized as 'field-based experiences' and 'classroom-based learning'. Field-based learning is the oldest and most reputable form of EL, which has been integrated into higher education since 1930s. It includes internships, practicums, cooperative education, and service learning (Lewis & Williams, 1994). Few notable

field- based learning is listed below: (George Mason University, 2011; Loretto, 2011; Northern Illinois University OTC, 2011).

- ***Apprenticeship Experiences/ On Job training***

In this, the learner gets an opportunity to undergo job training under a mentor and usually earns a certification for the training. This will assist in sharpening the skills which can increase the employability of the learner.

- ***Internship Experiences***

These are job-related and provide learners with an opportunity to gain a very good work experience. Internships can be paid or unpaid**.**

- ***Cooperative Education Experiences***

Compared to internships, this is a more extensive and usually spans two or more semesters of work. Cooperative Education (co-op) is a paid professional work experiences which are closely tied to the academic work. Usually co-op experience is given to those disciplines where it is included in the curriculum with specific credit hours.

- ***Field Work Experiences***

This allows learners to explore and apply the content learned in the classroom in a specified field experience. Field work experiences bridge educational experiences with an outside community which can range from field visits to neighbouring sites or schools to larger laboratory facilities/ sites.

- ***Practicum Experiences***

This experience usually requires a component of the course of study and specific supervision by the course instructor. The experience will help the learner to develop

competencies in the course and will help in designing projects or apply the knowledge for practical use in an effective manner.

- ***Clinical Experiences***

This is the hands-on experience, usually defined in the curricula, associated with some specific courses like psychology, medicine, teacher learning etc. This experience is usually essential for the learner to attain the outcome of the course.

- ***Service Learning Experiences***

In this EL experience, a community level service, usually addressing any issues of the society, will become the part of learning. The learner not only gains the ability to address the societal issues using their knowledge domain but also develops a deep understanding on these issues and gain good citizenship qualities. Service-learning experience can be explored during times of natural disasters like pandemic and also for solving many societal issues like hunger, lack of sanitation, homelessness etc.

- ***Student Teaching Experiences***

This provides the learner a chance to explore the practice of knowledge sharing to their peers or other groups. The teaching experience gives them immense opportunity to reflect on their own skills and get actively involved in the pedagogy. The programmes, like graduate programmes on teaching, requires prolonged experience with on-site and off- site teaching experiences which are usually defined in the curricula. In those cases, the learner needs to define their own pedagogy and reflect and analyze their experience more critically to attain the desired outcome.

- ***Volunteer Experiences***

In this experience, the learners volunteer for services to the community by associating with non-government organizations (NGOs) or other service groups like Red Cross in a formal manner or done individually in an informal manner.

In addition to these, experiential learning can be achieved by other means such as student exchange programmes, fellowship experiences and research-based learning.

Classroom-based experiential learning includes role-playing, case studies, simulations, presentations, and various types of group work. Classroom based EL gained a lot of momentum since "Chickering and Gamson recommended 'active learning' as one of the seven 'principles of good practice' for excellence in undergraduate education" in 1987 (Lewis & Williams, 1994).

Assessing Experiential Activities

It is essential to evaluate and assess the experiential learning to identify the outcome of the process. Many possible ways of assessment are suggested, either internal or external, to identify the attainment level. Some commonly adopted methods are:

- Presentation of the learning experience by the leaner
- Maintenance of a learning portfolio
- A report or a write up on the learning experiences and outcome
- A product / prototype developed
- An article submission
- Oral evaluation by the instructor
- Self-awareness tools and exercises like questionnaires about learning patterns

Of these methods, Qualters suggested the learning portfolio as one of the best methods of assessing experiential learning. Learning portfolios includes a reflection component and hence can be considered as a "purposefully designed collection connected by carefully thought-out structured student reflections." (Qualters, 2010).

Conclusion

Experiential learning experiences can assist in equipping learners to their chosen careers by reinforcing the content learning by experience. The learner centric approach will help in experiencing, reflecting and applying the content learnt with the involvement of learner in the pedagogy. In addition, it ensures holistic development of

the learners with better problem solving and decision making skills. Thus, experiential learning has become an inevitable approach in the teaching learning process and the use of information and communications technology tools can make both field based and classroom based experiential learning more engaging.

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Critical Review of Quality Management Systems in Higher Education Institutions

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Abstract

Although HEIs effort to implement Quality Management Systems (QMS) is the outcome of a rapidly changing higher educational landscape, public concern and improved stakeholders expectations, QMS helped HEIs enhance institutional effectiveness and processes, thereby improving outcomes. The focus of this study is to examine the QMS in HEIs, the various models and frameworks used and the challenges in implementing QMS in HEIs. We followed a critical literature review of the empirical literature on the subject. The review shows several models and frameworks in QMS; however, all the models focus on four major elements of a systematic and sustainable process; planning, deployment, result and improvement. Several challenges exist, such as resistance to change, limited resources, and balancing priorities. Developing and implementing an effective QMS in HEI, though criticized for its reliance on standardization, compliance documentation and process improvements at the cost of academic excellence, provides a valuable tool that helps HEIs to meet the challenges of a rapidly changing higher education landscape.

Keywords: *Quality Management System, Higher Education Institutions, accreditation*

Introduction

The higher education institutions (HEIs) landscape has become highly competitive in recent decades. Public concern demanded HEIs develop and implement systematic and sustainable quality management systems to substantially improve their process performance and quality level (Dwaikat, 2020). Many universities have recognized the

necessity of organizational change and new institutional forms in compliance with technological changes and growing instability in labor markets in the context of skills requirements (Gulden et al., 2020). Other factors that fostered the quality movement in HEIs include the need for accountability and the relevance of HEI to society (Manatos et al., 2017). Besides changes in the external environment, Institutional and Program Accreditation requirements by regulatory and accreditation bodies necessitate HEIs to demonstrate systematic, consistent and sustainable quality assurance practices to achieve HEIs vision, mission and strategic priorities. Global university rankings such as QS Ranking (Quacquarelli Symonds University Rankings), Times Higher Education, Shanghai Rankings and so on have used different methodologies to measure the performance of HEIs.

Higher Education Institutions (HEIs) are responsible for developing human capital through various teaching and learning activities. Safdar et al., (2020) pointed out that HEIs are responsible for training and developing students as per industry requirements. Graduate attributes are explicitly embedded into the programs, and conscious efforts are taken to develop systems, policies, processes and activities to impart graduate attributes using the various programs of study. The stakeholder expectations are reviewed and integrated into the programs at regular intervals. However, many empirical reviews criticized HEIs for failing to embed employability skills among graduates (Abbas et al., 2021; Imran and Abbas, 2020; Abbas and Sagsan, 2019; Baughman, 2018). Stakeholders require HEIs to develop and implement an effective quality management system to address this gap and enhance education quality. Abbas et al., (2021) reiterated the significance of QMS in HEIs and pointed out that QMS Is a significant factor in enhancing students' employability, and industry–academia collaboration is found to act as a partial mediator in this relationship.

Quality management systems (QMS) have become increasingly important in higher education institutions worldwide. This is because the quality of education and the reputation of higher education institutions are critical to attracting students, faculty, and funding. Quality management systems are processes and procedures designed to ensure that a product or service meets specified requirements. In the context of higher education, QMS involves the use of standard quality assurance practices to ensure the delivery of quality education. The quality of education can be evaluated based on the learning outcomes, teaching methodologies, course content, and student feedback. This

research critically examines the various quality management systems in higher education institutions and the challenges faced by HEIs in the implementation of quality management systems.

Quality Management Systems in HEIs

The core activities of HEIs are to create, transfer, augment, revise, expand and exchange knowledge, skills and intellectuality to enhance the quality of human life (Dwaikat, 2020). Higher education institutions play various roles, such as: training the students and preparing them for the economic environment by involving them in the teaching-learning and research processes. Achieving excellence in Education requires HEIs to implement robust quality management systems in alignment with their strategic priorities. The strategic priorities are derived from the HEI vision, mission statement, values, and graduate attributes. A Quality Management system is critical to achieving strategic priorities and best practices' sustainability. QMS helps HEIs meet their stakeholders' expectations, including students, faculty, staff, parents, industry, accreditation agencies, government and other funding agencies. By offering consistency and quality outcomes, HEIs gain a competitive edge to attract and retain students, faculty, and staff and secure funding from government agencies and private organizations. QMS also helps HEIs to monitor their approach, deployment and results and performance and continuously improve the quality of their education programs. Further, QMS helps HEIs to maintain their reputation and standing in the academic community. HEIs that have a reputation for providing quality education are more likely to attract students and faculty and receive recognition for their contributions to the academic community.

Higher Education Institutions adopt different models, frameworks and approaches to Quality Management Systems. Though differing models or frameworks exist, a QMS in HEI includes the following components:

- Planning: The stage defines the approach derived from the HEI mission, vision and value statements. A strategic plan with a time span of five years is usually prepared, which is further cascaded down to short-term operational plans and action plans.

- Implementation: This is the deployment phase wherein the Hei implements the plan by designing and delivering courses, managing resources, and monitoring student progress.
- Evaluation: This is the result phase, wherein the HEI systematically collects the implementation results. Primary and secondary data are used to evaluate the strategies deployed. For example, student satisfaction surveys are used to collect primary data, while student progression and retention statistics are derived from official records to evaluate the effectiveness of teaching and learning. Most accrediting agencies prescribe the standards, principles, and criteria that exhibit performance standards and expectations.
- Improvement: This phase utilizes the data, evaluates the performance and then develops action plans to improve the programs, delivery and resources. Annual reports, operational plan achievement reports, and strategic plans achievement reports provide inputs to the improvement phase.

The cycle continues and results in continual improvement. Currently, HEIs are 'forced' to implement internal quality management systems based on the guidelines provided by accreditation agencies, funding and regulatory bodies. More specifically, the demand for implementing quality management systems results from increased pressure from the stakeholders and their demand for quality outputs in HEIs. Gulden et al., (2020) rightly described the quality assurance initiatives of HEIs at present. External pressures, like political, economic and technological, as well as competition in labor and education markets, have challenged HEIs to reconsider their organizational structures and internal management approach to provide better quality education, to attract more potential stakeholders, as well as to sustain their positions at local and global markets

Quality Management Approaches in Higher Education Institutions

QMS models in HEIs have gained momentum over the years to enhance institutional quality, increase stakeholder satisfaction, and improve organizational performance. QMS models follow international standards such as ISO 9001 or EFQM Excellence Model. Also, change models and frameworks such as McKinsey 7 S Model and frameworks such as Balanced Scorecard, ADRI approach, and PDSA cycle are also used in HEIS to enhance operational effectiveness and sustainable quality initiatives.

These models provide a framework for organizations to assess, measure and continually improve their performance. Additionally, customized models tailored to HEI needs have also been developed by HEIs. As discussed, the various quality management models create systems and process that allows HEIs to plan, deploy, measure and improve the processes systematically and sustainably.

ISO 9001:2000:

ISO (2005) defines a Quality Management System as a system that directs and controls a quality organization. The ISO 9001 standard is generic and can be applied by any organization, irrespective of the products and services it provides, its size or the nature of its operations (ISO, 2005). Many HEIs have incorporated ISO 9001 framework, and it is considered to be a popular choice among the HEIs (Rosa et al., 2012; Thonhauser and Passmore, 2006)

Basically, ISO 9001 standards were initially designed for the manufacturing industry; however, they were adapted for HEIs. Four major phases of QMS is evident in the implementation; initiation, internalization, alignment and improvement. ISO approach to QMS is focused on continuous improvement, customer satisfaction, and the use of data to inform decision-making. ISO 9001 standards provide a systematic framework for quality management that can be applied to all areas of an institution, including teaching, research, and administration. Jingura et al., (2019) pointed out that academic provision and administrative services can benefit from its adoption. It can promote and strengthen the development of a quality culture, primarily when staff are deeply engaged in the process.

Wahid (2019), while examining the implementation of ISO 9001-based quality management systems in HEIs, explained that the success factors for implementing and maintaining the QMS are a commitment from people, training and good communication.

Source: ISO 9001: 2008 Standard Model (adapted from ISO, 2008)

A potential weakness of the ISO 9001 framework in HEIs is that it may not consider the unique characteristics of higher education institutions, such as the role of faculty in teaching and research. In most cases, the framework helps develop a systematic process for implementing business processes; however, it mostly doesn't comply with the accreditation agencies' guidelines.

Total Quality Management (TQM):

Total Quality Management (TQM) is an approach to QMS that emphasizes the involvement of all stakeholders in quality improvement. This approach is based on the principle that quality is the responsibility of everyone in the HEI, not just a single department or individual. One of the strengths of this approach is that it encourages collaboration and teamwork, which can lead to improved communication and a shared sense of responsibility for quality. However, a potential weakness of this approach is that it can be challenging to implement in institutions with a hierarchical structure where decision-making is centralized. In a study focused on Greek private-sector HEIs, Psomas and Antony (2017) pointed out that TQM elements adopted by HEIs include student focus, leadership and top management commitment, strategic quality planning, process management and teaching staff and employee involvement. By implementing TQM, HEIs achieved quality performance improvement, teaching and employee satisfaction, operational performance improvement and a positive impact on society.

Lean Six Sigma:

Several studies, including Sunder (2016), have advocated the implementation of Lean Six Sigma in Higher Education Institutions. Lean Six Sigma is an approach to QMS that combines two methods: Lean, which focuses on reducing waste and improving efficiency, and Six Sigma, which focuses on reducing defects and improving quality. This approach is based on the principle that continuous improvement requires a data-driven approach to problem-solving. One of the strengths of this approach is that it can be used to identify and eliminate inefficiencies and waste in institutional processes. However, a potential weakness of this approach is that it may not consider the unique characteristics of higher education institutions, such as the role of faculty in teaching and research.

EFQM Excellence Model:

The EFQM (European Foundation for Quality Management) Excellence Model is a comprehensive framework for quality management based on Total Quality Management principles. This approach to QMS emphasizes the importance of leadership, strategy, and continuous improvement. One of the strengths of this approach is that it provides a holistic view of quality management that considers all aspects of an institution. Laurett and Mendes (2019) examined the application of the EFQM model in HEIs. They pointed out the challenges in its implementation, as the model focuses on the "customer," a more complex measure in a higher education setting. HEI includes a diverse set of stakeholders with different expectations contrary to the customer satisfaction concept in a business setting.

Accreditation Standards

In the higher education landscape, a growing trend has been observed over the last few years to create an assurance of quality by accrediting HEIs by national and international accreditation agencies. Accreditation is a process by which an external agency evaluates higher education institutions to determine whether they meet specific quality standards. Accreditation is often used to ensure that institutions provide quality education and meet their stakeholders' needs.

Several accreditation agencies exist, national and international, focusing on institutional accreditation and program accreditation. The accreditation agencies developed standards and processes, benchmarked with international standards, for HEIs

to follow. HEIs prepare self-assessment reports to showcase the progress made, and accreditation agencies triangulate the submissions through site visits and discussions with key stakeholders. One of the strengths of this approach is that it provides a level of assurance to students, faculty, and funding agencies that an institution is providing quality education. However, a potential weakness of this approach is that it can be costly and time-consuming for institutions to maintain accreditation.

To sum up, QMS models and its implementation in HEIs involve various stakeholders, including university management, academic and administrative staff, students, and external quality assurance agencies. A systematic approach to quality management includes planning, implementing, measuring, and continuously improving quality processes. Critics argue that QMS brings standardization, process improvement, and compliance rather than a focus on academic excellence. They also argue that QMS focuses on documentation and creates bureaucratic and time-consuming processes that detract from the core academic mission and expectations. On the other hand, scholars who favor the QMS models argue that HEIs become more efficient and effective, resulting in better student outcomes and increased stakeholder satisfaction. QMS models provide a framework for continuous improvement essential in a rapidly changing and competitive higher education landscape.

Benefits of QMS in Higher Education:

There are several benefits to implementing a QMS in higher education institutions. Some of these benefits include:

- Improved student learning outcomes: QMS helps institutions to improve the quality of their education programs, resulting in better student learning outcomes.
- Enhanced reputation: By implementing a QMS, institutions can improve their reputation and stand in the academic community.
- Improved efficiency: QMS helps institutions to manage their resources more effectively, resulting in increased efficiency and cost savings.
- Improved decision-making: By gathering data and evaluating the effectiveness of their programs, institutions can make better-informed decisions about resource allocation, program development, and other important issues.

Challenges of QMS in Higher Education:

Implementing a QMS in higher education institutions can be challenging. Several empirical reviews listed factors that affect successful QMS implementation. Cullen et al., (2003) argued that recognizing key performance indicators on their own can be dysfunctional unless they are grounded within the culture of a strategy-focused organization. Wahid (2019) listed the significant challenges in implementing QMS in HEIs: lack of knowledge and understanding of the processes and standards, lack of relevant skills, lack of commitment and cooperation from people, lack of resources and poor communication. Horine and Hailey (1995) identified five key challenges for implementing QMS in HEIs: organizational culture, senior leadership commitment, faculty support, implementation time, and training. Similarly, Papanthymou and Darra (2017) pointed out that infrastructure limitations focused on human and financial capital, limited involvement of stakeholders and measurement of a complex range of performance indicators also distort the QMS effectvebess. A review of literature in this regard has shown that HEI faces many challenges in QMS implementation, the most important among which are;

- **Resistance to change:** Implementing a QMS may require changes to existing processes and procedures, which can be met with resistance from faculty, staff, and other stakeholders. Often, resistance from internal stakeholders leads to challenges in the implementation; however, it can be addressed by communicating the QMS goals to them. HEI management should take ownership of QMS implementation than assigning the task to a separate team. Resources need to be mobilized, and inputs should be collected from stakeholders, facilitating their support of the QMS implementation.
- **Limited resources**: Implementing a QMS may require additional resources, such as staff, funding, and technology, which may be difficult for some institutions to obtain. Overloading the existing staff with additional tasks will create resistance to the QMS implementation and must be avoided.
- **Lack of data:** In some cases, institutions may not have the data necessary to evaluate their programs' effectiveness or identify areas for improvement. This is one of the critical issues HEIs face. To mitigate the challenges, many HEIs have created a common repository wherein the information is saved, and access is restricted depending on the information content.

- **Balancing competing priorities:** Higher education institutions may have competing priorities, such as research, teaching, and community engagement, which can make it challenging to implement a QMS. In addition, the institutional and program accreditation initiatives, coupled with ranking initiatives such as Q.S. ranking, overwhelm staff workloads.

These are some of the challenges the HEIs need to look into carefully. An effective QMS should address these issues and provides opportunities for growth to all stakeholders.

Recommendation and Conclusion

A QMS in HEI is successful when it aligns well with HEI culture and strategic priorities. A commitment to enhancing quality from the top administrative echelon to the lower levels is warranted to implement QMS successfully. O'Mahony and Garavan (2012) pointed out that four factors are critical for the effective implementation of QMS; senior leadership and sponsorship, stakeholder engagement, the management of culture change, and implementing the quality process. Lomas (2004) stressed the need to align quality management models with the HEI culture and structures. If embedding is to occur, there needs to be a careful consideration of the opportunity costs of the various options that could bring about the necessary transformative change. The fit between the QMS and HEI traditions, values and purposes must be established (Birnbaum, 2000) to gain support from all stakeholders in HEIs. While integrating models primarily developed for industrial organizations, HEI must analyze its fit-for-purpose in a higher education setting. Further, once QMS is selected, HEI must ensure stakeholders' engagement in the planning and deployment of QMS,

For effective implementation, Strategic plans must be aligned with the resource plan. Allocation of resources, both financial and non-financial, are imperative for the success of QMS. Similarly, HEI should have systems to collect and analyze the results and the attainment of strategic priorities. Lack of data to evaluate the deployment of plans and lack of attention to the results and improvement measures often take down the purpose of QMS. O'Mahony and Garavan (2012) reiterated it and concluded that long-term commitment to resources and systematic performance auditing facilitate the effective implementation of QMS in HEIs.

Quality Management Systems in HEIs create a systematic, sustainable and consistent mechanism to review business processes with the organization's strategic priorities. Stakeholders consider quality assurance systems as synonyms for organizational excellence. An effective QMS ensures that HEIs meet stakeholder expectations and ensure the highest quality teaching and learning standards. The report highlighted that many QMS frameworks and approaches do exist. Success depends on the effective implementation of the framework and necessitates support from internal stakeholders. To conclude, QMS helps institutions to meet the needs of their stakeholders, improve the quality of their education programs, and maintain

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Digitalization in Education

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Abstract

The New Education Policy (NEP) 2020 has been released by the newly renamed Ministry of Education and approved by the Union Cabinet of India in July 2020. The vision of NEP 2020 is to reshape and transform the education system and structure in the country. It aims at universalisation of education from pre-school to secondary level. The NEP 2020 has special area of interest on online education. Various universities and institution like NITs and IGNOU will conduct various researches for improving and enhancing the benefits of Digital learning in India. Online tools and platforms like DIKSHA and SWAYAM will be upgraded with new learning insight to students, in-class resources, assessment aids, profiles and so on such that there will be a seamless interaction. It also focuses on creation of public digital and interoperable infrastructure that can be utilised by multiple platforms. NEP 2020 emphasizes the creation of virtual labs wherein students can practice their theoretical knowledge and make course content available in different languages. The newly renamed Ministry of Education proposes to set up a dedicated unit for promotion of digital learning

The present age is driven by digital technology and whole globe come under the influence of internet and World Wide Web. The internet equipped both the education seeker as well as education provider and laid them together under the virtual roof. Due to which the concept of virtual classroom is already popularized across the globe. Therefore, in the modern era, the role of online technology in providing the education is vital and with its flexible nature the online educational technology has gained popularity. The online education is now more accessible to the less privileged groups in comparison to the centralized classroom education system.

Keywords- *Role of NEP 2020 In Education Sector, Key Initiatives, Digitalization In Education, Digital Education Challenges*

Introduction

Education is an inevitable right which should be provided to the society. It is needed to achieve and develop an equitable knowledgeable society and hence promoting national development. Providing universal access to quality education is very much important for economic growth, social justice and equality, scientific advancement, national integration, and cultural preservation. The NEP 2020 released by MoE strongly emphasise digital and online learning to make education accessible to every child of India.Education in India is undergoing a rapid transformation. India is the home to 1/5th of World's youth and is in the midst of a massive education reformation process. NEP Policy 2020 aims to completely transform the Indian education system and make the country a "Global Knowledge Superpower" by 2030.

The Education Policy (NEP) 2020 seeks to integrate widely available professional education in major areas such as agriculture, technology, law, pharmaceutics, and other fields with the mainstream educational courses, as well as to generate a multifaceted educational ecosystem through all stages of a person's life. The goal is to provide a comprehensive and interdisciplinary curriculum which is of exceptional quality, has a high degree of global competency, and is appropriate to India's twenty-first-century development goals. The NEP 2020 is a possible document that sets out a broad scope for India's prospective higher education system, including liberalization and globalization of primary, middle and higher education, and also professional education

Digitalization in Education

Under the new education policy of 2020, the educational system has been fixed by 2030.Digitalization in education refers to the use of digital technologies to teach students of all ages. It can be the usage of desktop computers, mobile devices, the internet and other types of digital technologies. The latest technologies collaborate with the Education sector such that it has blurred the boundaries of physical distance as well as it has embedded various scientific ways to impart knowledge to the students.

The five pillars that make the NEP 2020 stand forward includes: Access, Quality, Equity, Affordability, Accountability. Actually we are in a stage between the stage of disruption and transformation.

Key Initiatives

A. Digital Infrastructure

Digital infrastructure refers to the set of tools and technologies that form the foundation for an institution's information technology and operations. This is a broad definition that includes all organizations and institutions that are in the 21st century. Digital infrastructure for schools can be defined as the tools and technologies that a school would require to set itself up in the digital space of the internet. The NEP 2020 acknowledges the need for creating an open, evolvable, and interoperable public digital infrastructure in the education sector. Multiple platforms and point solutions can use this infrastructure to improve India's device penetration

B. Online Teaching Platforms and Tools

An online learning platform is a webspace or portal for educational content and resources that offers a student everything they need in one place: lectures, resources, opportunities to meet and chat with other students, and more. It is also an excellent way for the student and the teacher to monitor student progress. There should be extension

of existing eLearning platforms to provide teachers with a rich set of assistive tools to monitor their student's progress

C. Virtual Labs

A web site or software for interactive learning based on simulation of real phenomena. It allows students to explore a topic by comparing and contrasting different scenarios, to pause and restart application for reflection and note taking, to get practical experimentation experience over the Internet. The schools should leverage the existing eLearning platforms to create virtual labs so that all students can access practical, hands-on learning experiences. There is a need to provide students and teachers access to online learning through appropriate digital devices, such as tablets with preloaded content

D. Content Creation, Digital Repository, and Dissemination

Digital repositories *are information systems that ingest, store, manage, preserve, and provide access to digital content.* A digital library, also called an online library, an internet library, a digital repository, or a digital collection is an online database of digital objects that can include text, still images, audio, video, digital documents, or other digital media formats or a library accessible through the internet. The schools should create a digital repository of content that includes coursework and other play/activity-based learning material. The learners should be able to rate the quality and effectiveness of the content. Schools can use student-appropriate tools like apps and games for fun-based learning

E. Blended Models of Learning

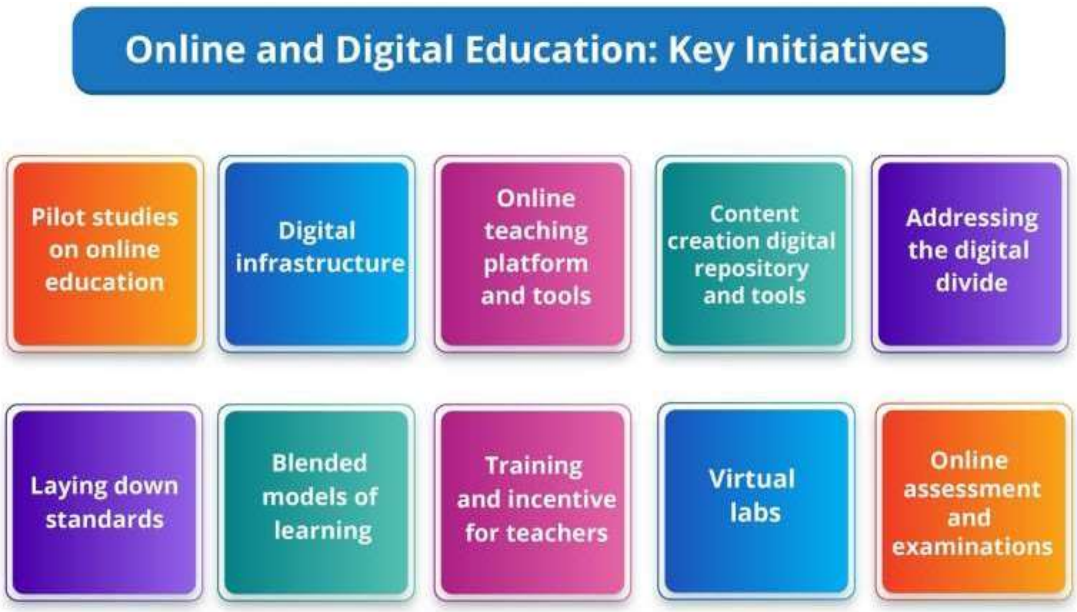
Blended learning is the term given to the educational practice of combining digital learning tools with more traditional classroom face to face teaching. In a true blended learning environment, both the student and the teacher should be physically located in the same space. NEP Policy 2020 recommends School Boards design and implement assessment frameworks that encompass the creation of competencies, rubrics, portfolios, standardized assessments, and assessment analytics

F. Online Assessment and Examinations

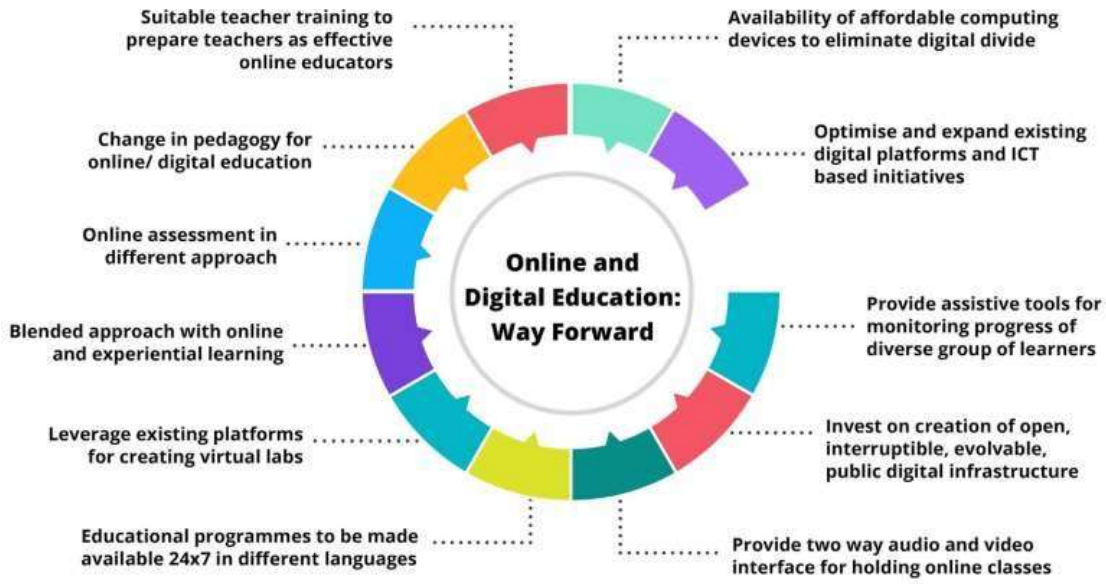
The assessment and examination will be online mode. No paper works will be left behind

G. Training and Incentives for Teachers

The school principals and teachers must undergo rigorous training to become top-notch online content creators. The new policy emphasizes the teacher's role in engaging students through online content



Online Education-A Step Forward



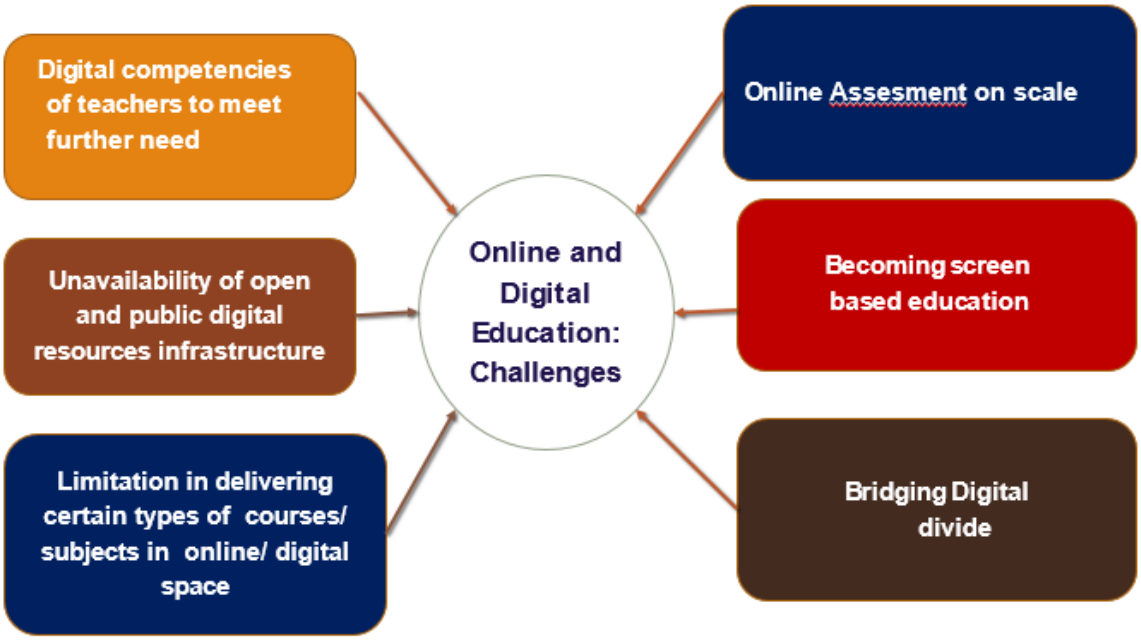
Actually, we have to see whether online and digital education will make us move a step forward. It provide various forward steps which includes the following:

1) Different approach in online assessment
2) Blended approach with online and experiential learning
3) Creation of virtual labs
4) Availability of educational program 24x7
5) Provide 2-way audio video interface
6) Creation of open, interruptible public digital infrastructure
7) Assistive tools provided
8) Assistive based initiative

Challenges

There are various challenges we face when there is a digitalization on education.It includes the following:

1) Digital Competencies of teachers to meet further needs
2) Unavailability of open and public digital resources infrastructure
3) Limitation in delivering various courses online
4) Online assessment drawbacks
5) Screen based education
6) Digital divide



Conclusion

Digitalization has no doubt changed our education system, but we cannot say that it has diminished the value of our old-time classroom learning. The best part about the digitalization of education in the 21st century is that it is collaboration of both; classroom learning and online learning methods. The Digitalization and online education have help us survive to withstand various pandemic including covid-19. As technological advancements, rapid globalization and unprecedented developments have transformed the future of work, the existing education models need to be reassessed in keeping the challenges of global economy. NEP 2020 recognizes the need to bridge the gap in education through technology and digitalization.But still there exists many challenges and unclear facts. So let us dream of a tech driven generation who are ready to plunge into the future workforce

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Transforming Higher Education for the Digital Age: Improving Quality through Post-Covid Digital Learning Initiatives

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Abstract

The COVID-19 pandemic has fundamentally changed the way we approach education. With traditional classroom settings no longer feasible, many institutions have had to quickly adapt to digital learning methods. This transformation has led to a renewed focus on the quality of digital education and the need for institutions to adapt their practices to meet the demands of the modern student. While this shift has been challenging, it has also presented opportunities for improvement in the quality of higher education. In this research paper, we will explore the ways in which digitalisation is transforming higher education and how it is enhancing the quality of learning for students. We will examine the best practices and strategies that institutions are implementing to ensure that their students receive a high-quality education in the post-COVID-19 world. Through a comprehensive analysis of the current landscape, we aim to provide insights and recommendations for institutions looking to improve their digital learning offerings.

Keywords: *Digital Learning, Personalised Learning, Student Engagement*

Introduction:

Maintaining quality is a key challenge for the Indian higher education system today so that students can compete on a global scale. As correctly stated by the Kothari Commission on Education, "India's destiny is being shaped in the classrooms." The country's future is shaped in higher education institutions like colleges and universities. There is a quality crisis in India's higher education system right now. Institutions of higher learning should now work to improve their quality in order to compete in the global education market. The Indian education sector has been seriously impacted by

the COVID-19 pandemic. More significantly, the crisis has instilled a generation with apprehension about what the future may bring. Virtual teaching models have to be implemented by almost all universities, colleges, and schools in order to guarantee that education would continue. Additionally, pupils have to get used to new digital device learning styles. The paradigm shift to digital teaching approaches completely caught the traditional education sector off guard. When it comes to effective digital education, using communication technologies like Microsoft Team and Zoom to simulate a classroom is not the complete picture. For a while, it appeared to be working because there was some academic interest, but teachers struggled to maintain their pupils' attention and involvement.

Statement of the Problem

Although the Covid-19 epidemic resulted in a considerable movement towards online and hybrid learning, there is still a need to restructure higher education in order to better utilise digital technologies and raise the standard of post-secondary education. With the goal of reforming higher education for the digital age and raising educational quality, this research study will look into the state of digital learning initiatives now being implemented in higher education. The study will specifically address the following research questions:

What are the most recent developments and difficulties in higher education's use of digital learning post-Covid-19?

How might initiatives in digital learning be used to raise the standard of post-secondary education?

What are the best methods for putting into practise digital learning projects that are successful in higher education?

Objectives

- To explore the impact of the COVID-19 pandemic on higher education and the shift towards digital learning.
- To identify best practices and strategies for enhancing the quality of digital learning in higher education.
- To analyse the key factors that influence the quality of digital learning.

- To investigate the challenges and barriers that institutions face in implementing high-quality digital learning programs.

Review of Literature:

Bejinaru, Ruxandra. (2013) carried out a study to reflect the impact of digitalization on the education sector both in the European context and in Romania. In a world of rapid and unpredictable change, leading to a turbulent business environment, HEIs must not only adapt to all these changes but become driving forces for change and leaders in building new contracts. Universities should develop strategies to increase their intellectual capital and become digital organizations. In the new economic and social landscape, universities should be able to become leaders of change and innovation. Joseph C. Daniel and Benjamin Franklin (2014) concluded that to make education learner-centric innovations in learning is essential. Problem-based learning, Social learning, experiential learning and Collaborative learning are some of the methods that can make it possible. Assessment methods, both summative and formative can be employed in a way to have better results. Education is a dynamic phenomenon and a proper curriculum is essential for quality enhancement in higher education. Puja Dhar (2016) conducted a research titled Role of Digitization in Enhancing Quality Education in India and explains each and every area of digitization in education including 2016 budget for digitization in education and leading examples that can prove how digitization will transform the nation. The findings reflects that for the success of digitization in enhancing quality education the government of India must be able to provide the basic necessities in this areas such as the facility of electricity, Internet, Wi-fi etc. Seethal , Dr. B Menaka (2019) in their study Digitalisation Of Education In 21ST Century: A Boon Or Bane discusses the pros and cons of digital education in India, the current status of online education and the initiatives taken by government for promoting digital education. The research concludes that digitalised education is very helpful for students to learn comfortably at home even using their smart phone, tablet or laptop. The adoption of new technology in class rooms by the teachers attracted students to learning rather than the traditional chalk and talk method. Zhao, Liao et al (2020), conducted a review on Digitization, Digitalization, Datafication, and Digital Transformation which was a scientometric analysis of 782 articles collected from the Web of Science (WoS) database. By examining the main sources and keywords, it shows several cross-disciplinary research fronts that involves disciplines such as

engineering, management, communication, etc., and topics such as collaboration, digital economy, digital platform, etc. Also, the digital transformation research has signalled a shift from technology to organization and people. The findings offer a preliminary roadmap for educators, researchers, and policymakers how more sustainable livelihood and life potentials can be achieved by harnessing digital potentials. Sonia & Dr. Raju Kumar (2021) conducted a study to determine the effect on Indian education systems of the COVID-19 pandemic. The research seeks to examine the experience of the students on online instruction, e-testing and e-assessment of exams. The survey revealed that students are more interested in classroom learning rather than online training, but also in computer-assisted evaluation. Kanwar and Sanjeeva (2022) described the development and implementation of a survey to assess undergraduate and postgraduate student satisfaction. The survey result directly highlights the importance and fexibility of method to evaluate overall satisfaction, satisfaction cognate to a single parameter and satisfaction for questions grouped together underlining some paramount aspects of higher education.

Research Methodology

The present study was conducted using both primary data and secondary data. A survey of students and faculty through a questionnaire was conducted to assess their experiences with digital learning during the pandemic. Secondary data sources, such as government reports and institutional data, was also used to understand the trends and patterns in the shift towards digital learning during the pandemic

The Impact of COVID-19 Pandemic on Higher Education and the Shift towards Digital Learning.

The impact of the COVID-19 pandemic on higher education and the shift towards digital learning has been significant. The pandemic has accelerated the adoption of digital learning programs by higher education institutions as a response to the need for alternative modes of instruction in a socially distanced world. The findings of the study has revealed the following: This shift has resulted in the following changes:

1. **Increased access to education:** The shift towards digital learning has increased access to education for students who may not have been able to attend in-person classes due to health concerns or other reasons.

2. **Improved flexibility and convenience**: Digital learning programs offer students more flexible scheduling options and the ability to learn from anywhere with an internet connection, making education more accessible and convenient.
3. **Enhancements in technology and resources**: Digital learning programs have resulted in the development and implementation of new technologies and resources that improve the quality of education and make learning more engaging and interactive.
4. **Unequal access to technology**: The shift towards digital learning has highlighted the digital divide, with some students having unequal access to technology and resources, which can result in disparities in educational outcomes.
5. **Challenges faced by institutions:** Higher education institutions have faced challenges in implementing digital learning programs, including a lack of technology infrastructure, instructor training, and student engagement.
    a) **Lack of resources**: One of the biggest challenges that institutions face in implementing high-quality digital learning programs is the lack of resources, both financial and human.
    b) **Resistance to change**: There may also be resistance to change from instructors, students, and other stakeholders, who are used to traditional in-person teaching methods and may be intimidated by new technology and digital learning platforms.
    c) **Inadequate technology infrastructure**: Another challenge is ensuring that the institution has adequate technology infrastructure and connectivity to support digital learning programs.
    d) **Lack of training and support for instructors**: Many instructors may not have the skills or training needed to effectively implement digital learning programs, which can impact their confidence and ability to engage students in digital learning.
    e) **Privacy and security concerns**: Institutions may also face privacy and security concerns regarding the collection, storage, and use of student data during digital learning.
    f) **Assessment and evaluation challenges**: There may also be challenges with assessment and evaluation in digital learning, as traditional

methods of assessment may not be suitable for digital learning environments.

g) **Student engagement**: Ensuring student engagement and interaction during digital learning can also be a challenge, especially as students may be less motivated to participate in virtual classrooms.

h) **Quality control**: Institutions may also struggle to ensure the quality of digital learning programs and to continuously improve them over time.

i) **Equity of access**: Ensuring equity of access to technology and resources for all students during digital learning may also be a challenge, especially for students from low-income backgrounds.

j) **Integration with traditional teaching methods**: Institutions may struggle with the integration of digital learning with traditional teaching methods, which may impact the effectiveness and quality of digital learning programs.

Best Practices and Strategies for Enhancing The Quality Of Digital Learning In Higher Education.

1. **Incorporation of interactive and engaging technologies**: Digital learning can be made more effective by incorporating interactive and engaging technologies, such as gamification, virtual simulations, and interactive videos.
2. **Personalized learning**: Personalized learning is crucial for improving the quality of digital learning. This can be achieved by using technologies that provide real-time feedback and analysis to students, helping them to improve their learning process.
3. **Integration of virtual classrooms**: Virtual classrooms can be used to facilitate real-time interactions between students and instructors. These interactions can be used to foster collaboration, discussion, and problem-solving activities.
4. **Use of multimedia and interactive resources**: Using multimedia and interactive resources such as videos, animations, and quizzes can help to make digital learning more engaging and enjoyable.
5. **Adoption of a flipped classroom approach**: A flipped classroom approach involves assigning readings, videos, and other activities to students before class, allowing for in-class time to be used for discussions, problem-solving activities, and other interactive learning activities.

6. **Incorporation of gamification elements**: Gamification elements, such as points, badges, and leaderboards, can be used to increase student motivation and engagement in digital learning.
7. **Provision of resources and support for instructors**: Institutions should provide instructors with training and support to effectively use technology in their teaching and to effectively engage students in digital learning.
8. **Regular evaluation and improvement of digital learning programs**: It is crucial to regularly evaluate the effectiveness of digital learning programs and continuously make improvements based on feedback from students and instructors.
9. **Promoting equal access to technology and resources**: Institutions should ensure that all students have access to the technology and resources needed to participate in digital learning, regardless of socioeconomic status.
10. **Encouraging student engagement and interaction**: Encouraging student engagement and interaction through the use of digital tools and resources can help to foster a more dynamic and collaborative learning environment.

Recommendations for Institutions Looking To Improve Their Digital Learning Offerings.

1. **Invest in technology infrastructure**: Institutions should invest in technology infrastructure and connectivity to ensure that students and instructors have access to the technology and resources needed for digital learning.
2. **Provide training and support for instructors**: Institutions should provide training and support for instructors to help them effectively implement digital learning programs and engage students in online learning environments.
3. **Foster a culture of innovation and experimentation**: Institutions should foster a culture of innovation and experimentation, encouraging instructors and students to explore new technologies and digital learning methods that can improve the quality of digital learning programs.
4. **Address privacy and security concerns**: Institutions should ensure that appropriate measures are in place to protect student privacy and security during digital learning, such as secure data storage and data sharing protocols.

5. **Evaluate the effectiveness of digital learning programs:** Institutions should regularly evaluate the effectiveness of their digital learning programs and seek feedback from students and instructors to identify areas for improvement.
6. **Promote equity of access**: Institutions should take steps to ensure that all students have equal access to technology and resources during digital learning, especially students from low-income backgrounds.
7. **Encourage student engagement and interaction**: Institutions should create opportunities for student engagement and interaction in digital learning environments, such as virtual discussion forums, peer-to-peer learning groups, and online projects.
8. **Integrate traditional teaching methods**: Institutions should work to integrate traditional teaching methods with digital learning, such as incorporating hands-on experiences and in-person meetings, to ensure that students receive a well-rounded education.
9. **Collaborate with other institutions**: Institutions should collaborate with other institutions and organizations to share best practices, ideas, and resources for improving the quality of digital learning programs.
10. **Stay up-to-date with emerging technologies:** Institutions should stay up-to-date with emerging technologies and digital learning methods and continuously seek ways to improve their digital learning offerings.

Conclusion:

In conclusion, the COVID-19 pandemic has accelerated the transformation of higher education towards a more digital-based learning approach. The shift has highlighted the importance of providing high-quality digital learning experiences for students and has created new opportunities to improve education through the use of technology. To fully realize the benefits of digital learning, it is crucial for higher education institutions to invest in the development of robust and accessible digital infrastructure and resources, to provide training and support for both students and faculty, and to continuously assess and improve the quality of digital learning initiatives. By doing so, higher education institutions can ensure that they are providing students with the skills and knowledge they need to succeed in the digital age. Overall, the COVID-19 pandemic has

accelerated the shift towards digital learning in higher education, presenting both opportunities and challenges. It has the potential to improve the quality of higher education by offering more flexible and convenient learning opportunities, promoting student engagement, and providing access to resources and technology. However, it is important for institutions to address the challenges and barriers to equity in digital learning to ensure that all students have access to quality education.

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