Enabling Quality Education through Teacher Training Initiatives in Indian Higher Education

Nawal Kishore Arora, Sandhir Sharma

[1]Chitkara University Institute of Engineering & Technology, Chitkara University, Punjab, India
[2]Chitkara Business School, Chitkara University, Punjab, India

Abstract

The studywas intended to summarize and analyse all the quality initiatives taken by AICTE and its implementation in the affiliated technical institutes of Madhya Pradesh state in India.A structured questionnaire was circulated for data collection among technical institutions regarding training initiatives for in house faculty and fresh faculty.The objectives of the researchwere to review quality initiatives of AICTE regarding teacher training, implement quality initiatives by institutions and suggest a suitable model for ensuring success of quality initiatives. Framework has suggested a) who can be benefited b) enabling inputs and c) outcomes of teachers training for smooth implementation of quality training initiatives.

Keywords – Higher Education, Quality Initiatives, AICTE, NEP 2020, Education Standards, Teaching Learning.

1.1 Introduction

"Our university system is, in many parts, in a state of disrepair. In almost half the districts in the country, higher education enrolments are abysmally low, almost two-third of our universities and 90 per cent of our colleges are rated as below average on quality parameters.I am concerned that in many states university appointments, including that of vice-chancellors, have been politicised and have become subject to caste and communal considerations, there are complaints of favouritism and corruption". 'Now is the time to establish a second wave of institutions and education excellence, science, & capacity development.' "Prime Minister Manmohan Singh in 2007".Traditional instructional approaches, out-of-date and static curricula and teaching methods, a short of transparency & good quality and the division of study and teaching pose concerns about the Indian educational system. To propel our economy forward, India needs more productive and trained population. India must qualitatively improve education in general and higher education with research and innovation in particular if it is to grow as a learning centre or a stable partner in the global economy. It is the educational system's responsibility to understand, assimilate, and analyze new ideas to its workers, Agarwal, P. (2006,2007).

In our education policy, we've been focused on 'What to Think' so far. We're concentrating on 'How to Think' in the NEP. We must also work together to enforce the National Education Policy, including the Conclave on Transformational Changes in Higher Education under the National Education Policy. From here, a new round of consultation and collaboration with universities, schools, school boards, various states, and various stakeholders is about to begin.Prime Minister Modi in 2020.

India's student population in higher education, after China and the United States, is the world's third-largest in terms of students.Since independence, higher education sector of India has seen a huge growth in the number of institutions of different types.Only three Indian universities were included in the top 200 institutes in the prestigious Quacquarelli Symonds (QS) World University Rankings 2020: IIT-Bombay, IIT-Delhi, and IISc (Bangalore).In order to increase the quality of education, more funding, greater understanding, and a re-evaluation of existing policies are all important. For every nation to achieve global competitiveness, it must have a high-quality education system

The higher education can be indemnified in to four major concepts :

(1) Qualified human resources:Higher education is viewed as a mechanism in which graduates are called "proceeds" incorporated into the labour market. Higher education thus becomes an outlet for business and industrial growth and development.

(2) Preparation for a career in research: Prepare skilled scientists and investigators who develop the boundaries of knowledge continually. The quality of research publications and the transfer of academic rigour into quality research are more important from this point of view.

(3) Efficient administration of the teaching profession:Many believe very strongly that teaching is the core of schools. Higher education institutions therefore focus on efficient teaching-learning management by improving teaching quality, enabling students to have a higher rate of completion.

(4) Considering as matter of extending life chances:Higher education is seen by means of a flexible, continuous education as a opportunity to participate in the individual's development process

The quality initiatives create a benchmark, decide what improvements lead to progress, enable performance comparisons, and assess organisational changes. Quality education seeks to cultivate a balanced range of skills in students for value addition to the social fabric of the society. The elements of quality education include well trained teachers, availability of books, active participation of faculty and students in teaching-learning and appropriate infrastructure.

1.2 Review of Literature

In 1986, Delaware County Community College in Pennsylvania became one of the first colleges in the United States to implement a TQM method and to see TQM's potential for improving an educational system beyond its utility in manufacturing Quality programmes are much more critical for institutions of higher education today because they are at a historical crossroads. There are remarkable opportunities for innovative leaders to introduce TQM and TQI programmes in the face of barriers to conventional methods of ensuring the quality of programmes, faculty, and students. Higher education agencies, must show consistency and effectiveness. (Cheong Cheng, Corneskyet al, & Ming Tam, 1997).

Quality scheme honours are the most widely used resources of higher education quality programmes for a number of reasons. The quality scheme award process establishes a mechanism for measuring quality in both higher education for business and industry The Malcolm Baldrige National Excellence Trophy, the Deming Application Prize, and ISO 9000 registration are the three most coveted prizes for quality management. These awards are also applicable to higher education because they concentrate on evaluating expectations for employee results as well as management process and development.

Owing to curriculum changes that are ongoing, and to be continued to occur, indifferents areas of the world, setting ambitious and demanding targets, teacher preparation and professional learning are attracting more recognition and interest. However, it is generally acknowledged that teacher education and career advancement are time-consuming processes . They are challenging and they are expected to have a significant effect on the teaching activities of the teachers. Teachers' own career growth is a challenge at all stages of education. As a result, they make an effort to attend teacher training and career development classes and invest in them. (Rodrigues, 2005).

Skepticism, increased instructor workload, a sense of ownership, fear of losing authority, a lack of resources, and a lack of perceived benefits are only a few of the reasons. Teacher's isolation is one of the main roadblocks to reform and professional growth. Professional learning must originate in the classroom and be enforced by the school's teachers in order to be efficient. As a result, there is a vital need to help and direct those teachers in order for them to effectively adapt to the increasing demands of teaching as well as the need to increase student learning expectations by creating innovative professional development services that can foster faithfulness. (Dufour and Eaker (1998), Richard, 2002, Fullan & Miles, 1992).

Teachers should search out valuable professional learning activities that are current and consistent with educational standards evaluations if they wish to succeed throughout their careers. Teachers should have a clear understanding of the essential value of teacher teaching and development. These two things are important in a teacher's career and represent the individual's success in his or her professional position. Teachers will gain expertise in the review, assessment, and appraisal of their teaching, teaching capacity, and teaching needs as they gain experience in their teaching role and professional development. (Glattenhorn, 1987).

1.3 Assumptions and Basis for Teacher Education

There are teachers with varying degrees of training, competence, qualifications, and abilities in every school or educational institution.Mutual sharing of knowledge is major source of professional growth in higher education sector. After teachers begin their careers, they are usually encouraged to pursue their professional growth.Language teaching and learning awareness is in a shaky and inadequate state, and teachers need daily chances to refresh their skills.Educational institutions aren't just for students to study in; they're even for teachers to learn in.Teachers should take an active part in their own continued education.It is the duty of schools and administrations to offer teacher instruction and continuing professional education programmes and to enable teachers to take advantage of them.It should often be noted that teacher preparation is a long-term process, not a one-time experience that begins and concludes with formal schooling, college education, and the achievement of particular degrees. Faculty education should be funded both by educational institutions and by individual contributions of teachers because it is an evolving mechanism that brings constant improvement.

Teachers will take part in any or all of the teacher preparation and career development activities that are frequently planned at the start of the academic year. However, since preparation sessions are held at the beginning of the year, they tend to be unresponsive to the urgent and evolving needs of students and teachers. As a result, the time spent preparing those instructional activities should be thoroughly researched and prepared in order for teachers to learn from them. Another big problem that teachers faced, and continue to face, in today's teacher preparation and career development programmes is that they are typically delivered in the form of a "lecture."Teachers would be seated, with someone either showing something on a screen or sitting in front of them and speaking. Some have also dubbed those sessions "Tyranny of the Lecture," since the curriculum is delivered in lecture style (s). Teacher leadership and career development activities of high quality should draw teachers' interest and involve them as committed agents. Interactive, realistic, and purposeful instructional activities can also be implemented. Faculty nd those in charge of Faculty preparation and career development services can face a variety of other challenges and issues.

1.4 Major challenges that teacher's face in their career development

There is an array of knowledge.We are not preparing teachers to educate students the way we expect them to do.Learning is not distinguished in any way; many decisions and actions must be taken to bring beneficial reform to Indian higher education.Adequate teacher selection is essential to increase instruction.Teaching standards and selection standards must all be raised.Teachers will be more willing to teach well if their program gives them with learning/teaching resources, as well as innovative technical equipment. Students will learn better, and achievement will be a reciprocal incentive. Learning may take place in such a working environment, but in the absence of such conditions, difficulties may often occur, and the standard of education can suffer.National Education Policy 2020 has all those ingredients that can change

the face of higher education not only in terms of quality processes and procedures but also through support system to make India quality education hub for the world, P.S.Aithal, et al, (2020) mentioned in their research work.

1.5. Government Initiatives in improving higher education teaching

The government is committed to improving the standard of higher education teaching. The UGC and the All India Council for Technical Education (AICTE) have also taken steps in this direction. The below are some of the main initiatives:

Diksha: It is a network for teachers that allows them to develop their potential in a variety of ways. It assists over 50 lakh teachers in raising educational standards. Teachers will upload their own materials to the portal, which also includes online classes, knowledge distribution, success tracking, and the introduction of energized text books with QR codes.

Technical Education Quality Improvement Programme (TEQUIP): This is a vocational education quality management initiative. J&K, Himachal Pradesh, and Uttarakhand, as well as eight Northeastern states, Madhya Pradesh, Andaman Nicobar, Uttar Pradesh, Bihar, Jharkhand, Odisha, Assam and Rajasthan, received Rs.2,600 crore in phase III. This means the geographical inequalities in technical education are bridged. 1200 IIT and NIT graduates have chosen to teach in educationally underserved areas for three years. They've returned to work in 53 government engineering colleges where there were a lot of vacancies. As a result, 1, 00,000 students now have access to high-quality schooling, which they previously lacked.

Global Initiative of Academic Networks (GIAN): So far, 700 professors from 58 countries have offered approximately 1120 specialised courses to students in Indian higher education institutions through GIAN. This foreign teaching exposure has supported above50,000 students and faculty members.

The All India Council for Technical Education (AICTE) has released a notification (Career Advancement Scheme for the Teachers and other Academic Staff in Technical Institutions) : Each college professor submits a performance-based assessment scheme (PBAS) in a proforma developed by the concerned institution/university, accompanied by all qualifications, in accordance with the Academic Performance Indicator (API) guidelines outlined in these regulations.The framework on the variables of education includes learner aptitude, readiness, perseverance, prior knowledge, barriers to learning, and demographic variables.

1.6 Quality initiatives of AICTE regarding Teacher training

Quality is considered as one of the main component to chart the success of any organization. The quality cannot be gained without highly motivated and committed staff. In order to ensure that the quality is retained at every level several quality initiatives had been framed by AICTE and other regulatory bodies of Government of India to provide a consolidated framework to the higher education sector. They came up with a single documented dossier in order to achieve

global education standards in India. Universities and Colleges have started conducting Training for all in-service Faculty members (namely Assistant Professor, Associate Professor and Professors).

These training programmes are framed with an objective to give orientation to the teaching pedagogy being adopted by the College and University and then outcome based several training sessions are being held. The content of these training programmes are designed by taking inputs from the industry and academia. The focus of these training programmes is to enrich the current curriculum, course plans and teaching pedagogy. It further focused on adopting innovative ways of teaching and breaks the mundane mode of classroom teaching so that the curriculum has its industry relevance. Several Training Programs are offered under the various quality initiatives for teachers. Colleges and Universities are conducting fresher faculty and in-service faculty trainings for their Assistant Professors, Associate Professors and Professors annually.

1.7 Evaluation of performance initiatives

While evaluating the performance of quality initiatives, it was found that all institutions under the study had communicated the strategic statements with important stakeholders of the institutions. 73% of the institution had already developed and deployed action plans for effective implementation of the quality initiatives. 92 % of institutions confirmed that the faculty getsustenance (procedural and practical) forsuccessfully improving teaching practices. 72% of the institutions confirmed that the management of their institutions clearly focus on teacher training (Fresher Faculty and In-Service Faculty) both. 90% of the institutions confirmed that they get regular support from AICTE schemes and teacher training and development programs from other regulators also. The study found that In-Service faculty were less interested in taking up such quality initiative programs as compared to Fresh Faculty. It was also found that majority of institutions (85%) offer variety of programs, elective courses and CBCS Choice Based Credit System which encourages the need of Faculty Development Programs in affiliated institutions in the state of Madhya Pradesh. 77% of the institutions were organizing several kinds of training development programs in an academic year to acquire additional skills and supplementary / enrichment faculty development programs along with their regular trainings as approved by AICTE..

Teaching must be viewed as an occupation with credentials rather than a position sought solely for the sake of employment. Teachers must therefore be trained and equipped with the necessary qualifications in order to be ready and fit for teaching. In delivering efficient teaching and good learning, they should be prepared with the requisite up-to-date expertise, teaching skills, and competencies. Although the teacher is the first responsible person in the classroom, a lack of preparation or poor teaching will put him or her in in the position of having insufficient subject knowledge, academic, and pedagogical expertise to teach a given subject, provide the lesson, evaluate learning, and to provide the student with the requisite learning and research experience.Attempts have been made in recent years and in the Indian Education System to

prepare certain educational programmes to educate teachers and help them develop their expertise and teaching skills. Every year, these preparation sessions are held for people who have graduated from university and plan to seek a career as an instructor.

They exist on a daily basis during the summer (for a short time), winter, and summer vacations. According to the rules, the average amount of time spent is between 7 and 15 days, although it can be up to 30 days in some situations. Trainees receive a certificate at the completion of the course indicating that they have learned those subjects. The timing, importance, seriousness, and consistency of every training programme are all critical factors. There are still questions! Does a month sufficient for new faculty to receive training in a range of courses required for future ? Is the pacing right? Is the preparation curriculum a continuous one or one that is scattered and self-contained? Is the educational curriculum detailed, useful, and implemented by specialists in the field? Are there any other ways for teachers to engage in ongoing career development? Are the educational and career learning services for teachers reviewed on a daily basis for the purpose of enhancement and gap filling? Is the material of those programmes specifically related to the topics learned, the instruction, the needs of students, and so on?

Many of these questions must be answered because it is far from certain that an instructor would be considered "trained" for the teaching profession after participating in a preparation programme for a limited period of time and/or receiving a credential. Pay is another problem that will have a significant influence on a teacher's level and career growth. Specific teachers may be unable to enrol in national or international teacher preparation and career development activities due to their low salary. Owing to financial constraints, going overseas to be educated is a far-fetched goal, and the only option is to enrol in online training programmes. But this is often problematic for teachers since such online services entail payment of a fee: a significant sum of money must be charged, and if it is paid, it must be paid by the actual teacher, not by the assistance of the classroom, educational agency, ministry of education, or any other powerful agent.

Educational institutions should make major investments in faculty training and professional development programmes to enhance and raise the standard of education. Faulty's motivation in the classroom is important and can come in a variety of sources. Every instructor needs the school's support and encouragement for their own efforts in teaching, study, diversifying instructional styles and strategies, adopting successful evaluation methods, and so on. Such involvement will signal that efforts are being encouraged and valued, allowing the instructor to step up and make even more efforts for the benefit of the students.

To fulfil the objective of suggesting a framework based on complete study, factor analysis comprising of nine statements dealing with the factors related to profile and challenges faced by assistant professors, associate professors and professors, teaching pedagogy effectiveness of teaching-learning paraphrase, imparting ethical values and belief systems, assimilation of

technology into teaching, performance evaluation, instilling problem solving approach, effective handling lab equipment and other related administrative profile was implemented.
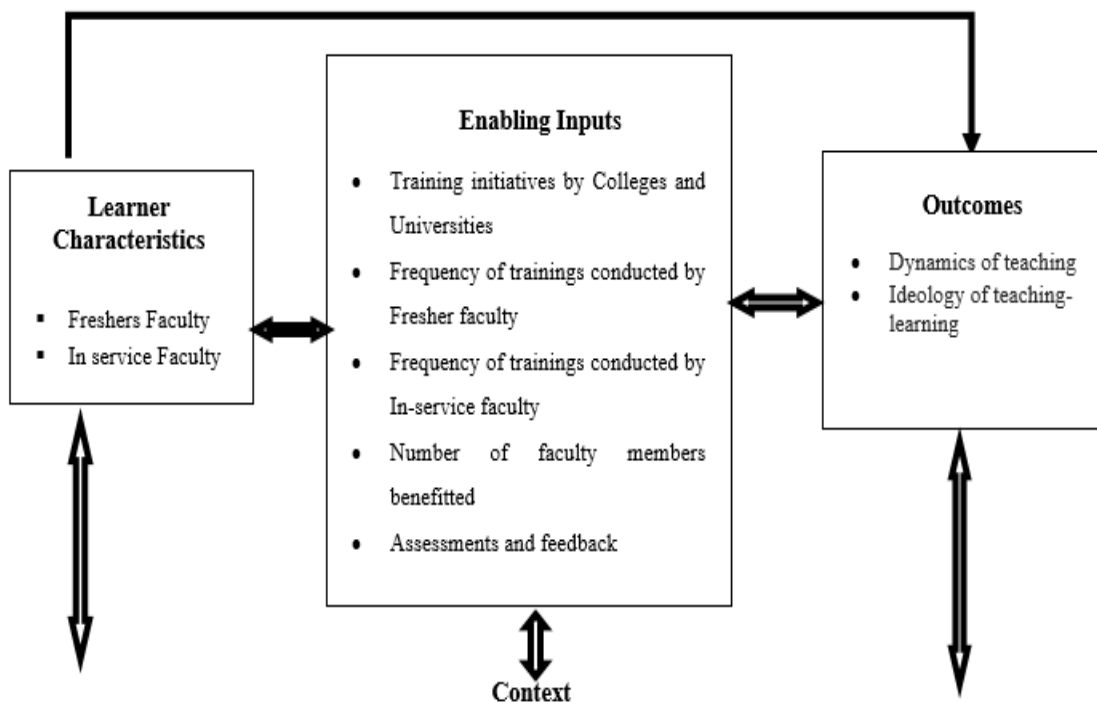
Kaiser-Meyer Olkin Measures of Sampling Adequacy		0.546
Bartlett's Test of Sphericity	Approx. Chi-Square	93.975
	Df	21
	Significance (p-value)	0.000

Table 1: KMO and Bartlett's Test of dimensions

Table1 represents values of KMO and Bartlett's Test of Sphericity for factor analysis employed. Kaiser-Meyer Olkin Measures of Sampling Adequacy came out to be 0.546. KMO value more than 0.5 indicates adequate sample size. Value of chi-square for Bartlett's Test of Sphericity was observed to be 93.975. This value came out to be significant (p-value=0.000) with 21 degree of freedom. Three factors were extracted with the help of principal component analysis method which were able to explain 59.905 percent of total variance.

All the statements were further concluded in two factors focusing on the performance parameters which would result in the quality enrichment of the Faculty. Factor "Dynamics of teaching" focuses on the number of Training sessions and Faculty members benefitted during fresher and in-service training sessions conducted during 2018 – 19 and 2019 -20. The results shows that while planning the chronology of the trainings every College and University must focus on certain quality indicators which will facilitate Faculty members to evaluate student's performance, gain problem solving approach and procedural implications of an academic institution. Secondly, factor "Ideology of teaching-learning" must give practical insight into the latest trends and practices in technical education, teaching methodology and ethical parameters of education which would guide and nurture student in his personal and professional spectrum.

1.8. A model for ensuring the success of quality initiatives

Enabling Inputs

- Training initiatives by Colleges and Universities
- Frequency of trainings conducted by Fresher faculty
- Frequency of trainings conducted by In-service faculty
- Number of faculty members benefitted
- Assessments and feedback

Learner Characteristics

- Freshers Faculty
- In service Faculty

Outcomes

- Dynamics of teaching
- Ideology of teaching-learning

Context

N1	A general overview of the current situation and problems of technical education, as well as the range of responsibilities and goals.
N2:	A basic view of the teaching-learning process, learning psychology, and successful pedagogical strategies
N3:	Programs to improve expertise in communication skills in different modes specific to the technical sector, as well as training for planning lesson plans and successful instructional processes.
N4:	Instilling a holistic mindset, professional principles, and ethical behaviors.
N5:	Introduction to suitable ICT materials and aids for successful teaching and learning, as well as opportunities for lifelong self-education.
N6:	Instruction in the proper application of different forms of student assessment.
N7:	Instruction in innovative problem-solving, research methods, and project management for R&D programs, among other items.
N8:	Observation of effective teaching habits, learning approaches, lab growth, and realistic class

Figure 1. Suggested framework based on research for quality initiatives by affiliated technical institutes in state of Madhya Pradesh

The above model suggested that fresh faculty and in house faculty both can be properly trained for better quality education in eight different contexts (N1 to N8) as mentioned in the Figure 1 above. Frequency of the training, Separate training pattern for in house and fresh faculty, maximum participation of faculty and proper feedback/assessments of training programs can be enabling inputs. Two outcomes a) dynamics of teaching b) ideology of teaching- learning can be achieved by implementing the model as a result of proper training programs.

Conclusion

Trainings are effective mode of learning amongst Faculty members in Colleges and Universities. Both fresher and in-service trainings results in lot of quality gains for Institution and Faculty members. All academic institutions must have fresher and in-service trainings focusing on profile of faculty at different levels (Assistant Professor, Associate Professor and Professor). The basis of the trainings should be on attaining problem solving approach, improving teaching methodology, enhancing curriculum, gaining research insights to develop and nurture research.Today's teaching necessitates a transition away from conventional rote learning and lecture-style instruction and toward instruction that promotes analytical and reflective thinking as well as the development of problem-solving skills in students.

Critical thinking instruction is deemed not to be extensively offered in schools. To meet the needs of students and the high expectations of the teaching profession, teachers must be taught in the usage of a variety of traditional and new techniques to teaching and evaluation. That is to say, adequate professional development is required for educational advances to be successful and beneficial. On this foundation, recent curriculum revisions push teachers to promote teamwork, dialogue, and pupils to learn through thought in order to help them develop the cognitive abilities and processes needed to meet learning and academic goals. Various types of teaching are being documented.

In reality, the concern arises from a lack of subject-matter awareness, pedagogical experience, and a lack of comprehension of instruction and resources. While personal likeness is essential, professional learning should go beyond that. Richards and Farrell (2005), for example, believe that professional learning should be prioritised. "For example, it includes exploration of new trends and theories in language teaching; familiarization with developments in subject-matter knowledge such as pedagogical grammar, composition theory, or genre theory; and critical examination of the way schools and language programs are organized and managed."

Teacher preparation and career development services are no longer concerned about supplying teachers with general fundamental information of a specific teaching technique or even

introducing them to one idea in a one-time workshop. Teacher education and career growth can result in a paradigm shift in teachers' teaching methods, which would lead to improved student performance.Despite the fact that evidence reveals conventional workshop-based career learning to be unsuccessful, many teachers have earned and will continue to receive it. Despite their relevance, the workshop presentations would not significantly aid in shifting teachers' teaching habits, values, and activities in the classrooms or improving student performance (Bush, 1984).

"Schools have demonstrated time and time again that it is much easier to implement reform than to sustain it to fruition" Dufour and Eaker (1998). The aim of a quality management approach is to see progress through to completion (Zmunda, Kuklis, & Kline, 2004). To ensure good learning and career-long advancement of teachers, teaching instruction and professional development must be comprehensive and provide appropriate materials, policies, and organizational supports. This needs cultivating a culture of constant appraisal and development in order to be successful.To sum up, In every educational facility, teacher training and career development programmes are critical. If teachers at all levels are to improve their teaching values, behaviours, and everyday life activities in schools, they must be educated on a regular basis in their relevant fields and subject matter. Teachers' teaching skills will be sharpened, and their understanding of the subject matter they teach will be deepened and strengthened, resulting in improved student performance and school education.

There should be a match between the programme and the teachers' own teaching interactions for meaningful and effective progress to occur. Another point to remember is how much time teachers expend on career learning and how successful it is. Professional learning that has as its primary goal practises that focus on high-quality subject-matter material will help teachers more.

Professional development can be a terrific vehicle for teaching improvement and learning progress if it is organised and delivered by professionals on a continuous basis to meet the demands of students and the requirements of Indian educational institutions. Faculty must participate in teacher preparation and career development programmes in large numbers. Faculty will always be teachers, and learning is a never-ending, unending process. Aside from that, faculty's education is no longer viewed as a gathering where they are informed about effective teaching methods. Faculty's learning mechanisms are more complex than they appear, and they necessitate continuous reflection.

References

1. Agarwal, P. (2006). HIGHER EDUCATION IN INDIA the Need for Change "Indian council for research on international economic relations".
2. Agarwal, P. (2007). Higher education in India: Growth, concerns and change agenda. Higher education quarterly, 61(2), 197-207.https://doi.org/10.1111/j.1468-2273.2007.00346.x.
3. Aithal, P. S., &Aithal, S. (2020). Conceptual Analysis on Higher Education Strategies for various Tech-Generations. International Journal of Management, Technology, and Social Sciences (IJMTS), 5(1), 335-351.

4. Bush, R. N. (1984). Effective staff development in making schools more effective. Proceedings of three state conferences. San Francisco, CA: Far West Laboratory. - Cambridge Professional Development Qualifications. 2014

5. Cheong Cheng, Y., & Ming Tam, W. (1997). Multi-models of quality in education. Quality Assurance in Education. https://doi.org/10.1108/09684889710156558

6. Darling-Hammond, L. Chung Wei, R., Andree, A., & Richardson, N. (2009). Professional learning in the learning profession: A status report on teacher development in the United States and abroad. Oxford, OH: National Staff Development Council.

7. DuFour, R., &Eaker, R. (1998). Professional learning communities. Bloomington, IN: National Educational Service.

8. DuFour, R., &Eaker, R. (1998). Professional learning communities. Bloomington, IN: National Educational Service.

9. Fullan, M. G., & Miles, M. B. (1992). Getting reform right: What works and what doesn't. Phi delta kappan, 73(10), 745-752.

10. Glatthorn, A. A. (1987). Curriculum Leadership. Scott, Foresman and Company, 1900 East Lake Avenue, Glenview, IL 60025.

11. Okamura, A. M., Richard, C., & Cutkosky, M. R. (2002). Feeling is believing: Using a force- feedback joystick to teach dynamic systems. Journal of Engineering Education, 91(3), 345-349.

12. Oliveira, J., Souza, J. D., Miranda, R., & Rodrigues, S. (2005). GCC: An environment for knowledge management in scientific research and higher education centres. Proceedings of I-KNOW'05, 633-640.

13. Richards, J. C., & Farrell, T. S. C. (2005). Professional development for language teachers: Strategies for teacher learning. Ernst KlettSprachen.

14. Zmunda, A., Kuklis, R., & Kline, E. (2004) Transforming Schools: Creating a Culture of Continuous Improvement. Alexandria, VA: Association for Supervision and Curriculum Development.