ISSN: 0973-0583

A Paradigm Shift: Blended Learning in Teacher Education

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ABSTRACT

The main objective of National Education Policy 2020 about Teacher Education is to ensure that teachers are given the highest quality training in content pedagogy and practice. For this purpose, there is a need of time to shift the teacher education programmeme into digital teacher education programmeme form. So, there is a Paradigm shift occurring during pandemic covid-19 in the field of teacher education with the help of Information and Communication Technology (ICT). Recently a new trend of blended learning is adopted to fulfil the aim and objectives of teacher education to prepare skilled and component teachers at global level. Aspiring teachers will be required for curriculum development, Pedagogy assessment techniques etc, who are also techno friendly. This paper throws light upon the paradigm shift of teacher education in blended learning mode that is the combination of online and offline mode of learning.

Keywords: ***Paradigm shift blended learning, pedagogy, ICT, Pandemic etc.***
Received : 30/7/2025 **Acceptance : 20/8/2025**

Introduction:

A paradigm shift is a sudden and drastic change that happens when the usual plan of action is replaced by a new, innovative, and different technique.A paradigm shift that occurs when the fundamental or conventional methods lose their influence. Then the dominant Paradigms become secondary and the recessive Paradigms become powerful So, there is a shift from dominant to recessive Paradigm. In the teaching - learning process, the conventional method of teaching or face-to -face mode of classes isdominant, and the online classes are recessive. Although there is the only option of online classes to impact knowledge for the teacher in the absence of physical interaction. Thus, the digital paradigm shift occurs in the field of teacher education in the mode of blended learning; online versus offline. A Paradigm shift is according to Thomas Kuhn in his influential book. The Structure of Scientific Revolution (1962), "A change in the basic assumption, or paradigms, within the ruling theory of science". The digital Paradigm shift enhances the interest, curiosity, skill and competence of pupil teachers as well as teacher educators.Diksha (Digital Infrastructure for Knowledge sharing) is a digital platform that makes it possible for the education ecosystem (educationist, experts, organisation institution- government, autonomous institution, non-government and private organisations) to participate, contribute and leverage a common platform to achieve teaching - learning goals at scale for the country. During the pandemic massive teacher's professional development programme NISHITA 1.0 (National Initiatives for school heads. In Teacher's Holistic Advancement) was launched online through DIKSHA portal. The new and digital teaching - learning techniques are helping teachers to enhance their competence through online discussion board, Google classroom, quizzes, pre-recorded videos, online instruction material, programmemed instruction methods, KAHOOT a web-based game, Computer Assisted instructions etc. In this unprecedented time of pandemic, the Paradigm shift in teacher education is the demand of both teachers as well as learners for cognitive development and constructive approach to get new and innovative teaching techniques.

According to Gage "A theory of teaching should answer three questions, how do teachers behave? Why do they behave as they do? and with what effect? It should be a general concept which applies to all teachers, to all students, to all subject matter and to all situations both in and out of school, in which teaching may occur". The simple meaning of the paradigm in teacher education is "sample". Some functions of paradigm in teacher education are discussed here.

- Recognition of the problem and provide modules for the solution of the problem.
- The next job is to provide guarantees that the universal solution of a particular problem is available. And lastly it is certain that the availability of essential resources for research.

According to Popkewitz, Tabachnick and Zeichner (1979), "A Paradigm in teacher education, can be thought of as a matrix of beliefs and assumptions about the nature and purposes of schooling, teaching, teachers and their education they gives shape to specific forms of practice in Teacher education". According to Doyle (1972) given a paradigm for research in his article. He named it the process- Product paradigm. According to shulman's teacher education research paradigm is content knowledge, pedagogical knowledge, classroom learning situation, and method of communications are included.

Teacher education is a set of procedures to improve teachers' proficiency and competencies. According to the National Policy of Education 1986, the pre - service and in - service of teacher education is inseparable. They both are complement to each other.

Teacher education = teaching skills + pedagogical theory + professional skill

In the recent era, we all are aware that the paradigm shift has taken place from offline mode to online mode during the pandemic era of covid-19 worldwide. Nowadays online teaching has become the mainstream teaching procedure in the educational institutions at global level. Therefore, there is a paradigm shift in the teacher education programmeme that has occurred from offline to online teaching. Technology has enabled the adoption of digital platforms from acceptance of the change in the mood of teaching. It is the main objective of teacher educators nowadays to concentrate the mind of pupil teachers for the cognitive engagement in digital technology or upon use of ICT.

In the era of COVID - 19 pandemic situations, we all easily understand how the integration of technology in teacher education is utilised properly. Technology Inclusion in every field is not an option nowadays however it has become a compulsion for us today. As an educator, incorporating technology into the classroom is no longer an option. This is because being technologically literate is no longer a benefit in the 21st century, but a requirement (Dincer, 2018). The use of technology in classroom is the matter of concern for the pre - service and in - service teacher education programme. The Pupil teacher must use technology in the preparation of lesson plan, Micro teaching, preparation of teaching learning material, plan to teach through the help of digital tools during their internship. Technology Pedagogy and content knowledge (TPACK) is a technology integration framework used to develop for the pre - service and in - service teacher education programme to include digital tools for transforming the teacher education. Therefore, the Paradigm shift or changing of face - to - face traditional classrooms is a shift drastically to change the paradigm of teacher education. Due to the use of Technology more and more in teacher education we will get quality pupil teachers, teacher-educators, flexible curriculum, and content also. The teacher education courses can be structured or modified according to the need and interest of pupil teachers and teacher educators more accurately. The teacher education programmes nowadays have a learner centred approach with the help of digital tools which is necessary for the successful training of teachers. For continuing professional development, the National Policy of Education 2020 suggested the PDP (Professional Development Programmes) for teachers. The teacher education programme in India is facing lots of changes and challenges in the arena of teaching learning process. Online learning is not the better replacement of face-to-face traditional classroom, particularly in the field of teacher education, because the teacher education programme

is the combination of practical and theories, but it requires the blended mode of offline traditional classroom versus e-Learning. The paradigm shifting of teacher education shows that the only present content is changing their format in ICT (Information and Communication Technology) based content. The main aim and objective of teacher education is modification of behaviour therefore the behaviourism approach is taken as a paradigm shift into constructivism approach. In the 21st century there is emphasis upon the production or construction of knowledge or subject matter whereas before the 21st century there was a focus upon collection and gathering of knowledge. In the era of 5G faster network we have to embrace digital technology in all aspects of life but there are some obstacles due to ignorance, unknown to the technology and illiteracy in India. For the holistic and overall development of learners the blended mode tools are used in teacher education.

Blended learning in teacher education is taken as a digital Paradigm shift. Blended learning is a mixture of learning techniques which embraces both offline and online mode of teaching learning process. It is a match mixture of traditional face to face classroom and e-Learning or web-based learning. Blended learning creates flexibility in many aspects of teacher education. It became more effective for students, academics, teachers, policy makers etc. The new education policy 2020 recommends the use of blended mode of learning. So, for a more flexible teaching and learning environment, there is a need of a paradigm shift in teacher education as blended learning. Blended learning transforms the teacher education programme as a new and innovative technique and set of procedures. Biometric attendance in teacher education institutions, technology-based instruction, new and innovative teaching method, and strategies individualised, instruction, evaluation through computer, computer-based test, teaching learning materials for the help of teachers are some applications used in teacher education programme these are present as software packages available upon web world. Blended learning yields more interactive teachers with their students. Now teacher as a guide, as a mentor, as a supervisor for learners not only instructor. Therefore, in the 21st century, Information and Communication Technology (ICT) is a great achievement for paradigm shift .The implementation of ICT as a smart classroom in teacher education institutions is the best option in teacher education institutions for this purpose. Hence, blended learning in teacher education changes the objective and aim of teacher education programmes. There are many types of blended learning models are available which can include in teacher education as follows: -

Flipped classroom blended learning model:

In a flipped classroom blended learning model, learners get the learning material on their own pace or buy some online self-paced learning. Learners can get the study material or e-content before or after face to face classroom or according to their preferred time. The learning model occurs in the form of discussion, case, or studies group projects.

Face to face driver model:-

This learning model is just like a traditional classroom setting, it is to be done under the guidance of an instructor, demonstrator or master trainer. This blended learning model is the innovative form of individual or personalised instruction.

Rotational model:

The rotational model is the combination of a fixed schedule of self paced instruction online learning and face to face interaction. The schedule of the model is rotated on a fixed schedule. In the teacher education programmeme,the pupil teachers have to submit their progress, they are tracked by the trainer. The learners' model is able to fill the research gaps.

Flex model:

It is the online form of personalised learning instruction which is specially designed according to the needs of learners. In teacher education the supportive flex blended learning model is necessary for the pupil teachers.

Enriched virtual model:

The enriched virtual model blended learning model is specially designed for remote learning experience. At online platforms, learners have to go through a scheduled instructor-led classroom session

either in virtual or physical classroom. It is a fully online training model. Blended learning increases teachers in the course. Teacher education needs some suggestions to integrate blended mode of learning as follows:

- New and innovative teaching methods availability.
- Provides remedial and diagnostic strategies of teaching methods.
- Self - paced learning materials.
- Evaluation with the help of ICT.
- Fast and accurate results etc.

For Holistic development of learners nowadays teachers are required to boost their engagement more purposefully. For this reason, teachers are adopting both the synchronous and asynchronous strategies of learning.

Synchronous learning:

Synchronous learning is online learning in which students and teachers are engaged at the same time, on a fixed schedule and with a fixed time limit. The example of synchronous learning is live stream audio, video, presentation or live chats, video conferences, live quizzes, debate, and discussions. Zoom, Google meet, Microsoft team etc. are examples of synchronous learning. The online lecture is delivered by the experts in this method; therefore, all students are kept online at a time. In this learning teacher is in as the lead role to deliver the subject matter and all learners listen, participate, and attend the session.

Asynchronous learning:

In the asynchronous learning the online pre-recorded videos are present online. Learners can listen to the lecture at different times according to their pace. Online discussion board,assignment,staff graded assignments, quizzes, mock tests, and pre-recorded videos are the best example of asynchronous learning. In this learning there is no need of physically present learners at a fixed schedule or on the exact time like synchronous learning. Synchronous and asynchronous learning both are essential for fulfilling the aim of blended learning. At National level the blended learning mode is included in developing teachers' competencies as identified by National Council of Teacher Education (NCTE) is going to discuss below:-

Contextual competencies

The teacher should have the ability to understand various contexts such as historical background, present status of socio-economic, cultural, linguistic, and religious context of the family milieu and the community profile. Teachers should be able to conduct surveys to find out the reason for Poor enrolment, poor performance and causes of certain problems like wastage and stagnation. For this purpose teachers must have digitally known and utilisation of ICT for finding results.

Conceptual competencies

Teachers should have clarity of thoughts, deep understanding of educational theories through knowledge of various educational theories, trends, pedagogical methods, techniques etc. Teachers should know the significant characteristics of child development and different stages to enable them to transact curriculum effectively. Concepts and educational implications of ICT for modernisation, globalisation and liberalisation have to be understood by teachers.

Content related competencies

Full Mastery over the concept of the subject that they must teach. They should find out the lag and gaps in curriculum which require explanation and elaboration. Teachers can improve their knowledge for imparting to learners with the help of digital tools.

Transactional Competencies

It refers to the skill of day-to-day teaching to achieve educational objectives effectively through meaningful interaction between teachers, pupils and environment by using different methods, activities and Technology in an integrated and effective manner that is; A teacher should be able to organise variety of activities such as storytelling, singing, games, field trip, celebration of national, social and cultural events celebration of national social and cultural events to make teaching learning process joyful, participatory and relevant. With the help of ICT and innovative technology teachers can improve their competency.

- To prepare appropriate teaching aids and other teaching learning material (TLM) to support and enhance the effectiveness of the teaching learning process. In the preparation of teaching learning material, computers help to save time.
- To integrate Computer Based test (CBT) for continuous evaluation while transacting subject content.
- To diagnose and identify weaker and brighter students to adopt remedial measures and undertake enrichment programme.

Educational Activities Related Competencies

For a child's cognitive and non-cognitive development teachers are responsible through online or offline mode of learning.

Competency to Develop (TLM)

- Teachers can use electronic gadgets.
- Special needs children are disadvantaged groups that meet their needs of teaching learning material (TLM).

Evaluation Competencies

- Teachers must develop the ability to undertake action research.

Management Competencies

Teachers are the managers of the classroom. It involves the skill of the teacher to achieve high quality educational objectives in minimum time, energy, and money through appropriate and effective use of educational aids and active participation of available human resources. Teachers can collect data online through the internet, Learning Management System (LMS) supports quality and excellence in education. According to the National Knowledge Commission (NKC 2005 - 09). There is a need for a web-based portal for sharing information, experience and exchanging ideas of teachers.

Conclusion:

A paradigm shift in teacher education in the 21st century is a progressive and innovative idea to boost the skills and competencies of teachers at global level. Teachers get model teaching, 3D examples, virtual classrooms, flexible curriculum with the help of blended learning. The teacher interacts with other teachers on a digital platform, It improves their cognitive and affective domains of learning. Hence the paper finds the important consequences of blended learning of education.

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