

Innovative Teaching Practice in Teachers Education

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Abstract

A nation's progress depends on the quality of its education system, which depends on teachers, and teaching is regarded as the most respectable of all occupations for this reason. As a result, the teacher plays an important role in both the educational system and in society. However, teaching is not a mechanical procedure. It's complex, challenging, and extremely exciting. The current study explores various innovative teaching practices adopted by the teacher's education system and helps to understand key aspects of innovative teaching practices in teacher education. The researcher conducted an intensive search based on keywords in different academic journal databases and different reports published in the recent past in order to achieve an analytical study based on the title of the paper. After making intensive literature study based on the theoretical concept the researcher made a primary survey to know current state of innovative teaching practice used in different teacher training institute in Bareilly District of Uttar Pradesh. At last the researcher concluded that there are specific barriers in our educational system that prohibit teacher education institutions from becoming creative, such as a lack of physical facilities and resources, a lack of dissemination of innovations among teacher educators, a restrictive framework, and a lack of research orientation, to name a few. The authors of this study have attempted to shed light on some of the necessary creative practices for teacher education.

Keywords: Innovation, Teachers Education, Smart Boards, Flipping Classroom, Virtual Reality, Collaboration, 3D Printing.

I. Introduction

A nation's progress depends on the quality of its education system, which depends on teachers, and teaching is regarded as the most respectable of all occupations for this reason. As a result, the teacher plays an important role in both the educational system and in society. However, teaching is not a mechanical procedure. It's complex, challenging, and extremely exciting.

Though teaching is viewed as a science and a skill, it is essentially a transcendent art because the teacher instinctively constructs the child's developing flexible mind. The teacher, like an artist, is responsible for influencing or changing the conduct of students in a socially desirable manner. As a result, the teacher must maintain touch with the student in order to mould her thinking in a creative manner.

Because of the changing nature and ongoing needs of human society, challenges in the Indian educational system have no permanent solutions. In the modern period, especially the twenty-first century, teachers will have to deal with a world that is different from the past in terms of pedagogical and technical progress. As a result, no teacher education programme can prepare instructors for every circumstance they may face in their careers.

Innovation is typically defined as establishing anything new and helpful, such as implementing new techniques, processes or practices or new or changed goods and services. Schools or teacher education institutions can innovate or experiment with any part of their educational, academic, instructional or school management work to enhance the institution's effectiveness in overcoming problems and problems they experience every day. The existing teacher education structure is supported by a national network of resource-orientated institutions at provincial and regional levels, working together to improve pre-service teacher education programmes' quality and effectiveness and thorough services for teachers across the country. Learning is increasingly increasing in response to the rising needs of the educational system. The evolving educational requirements of the student and technological development extend to the teacher's area of responsibility. Teachers now have different roles to play, including encouraging, promoting and facilitating educational situations that help students discover their talents, fully realised realise their intellectual and emotional potential, develop character and desirable social and human values that function as responsible citizens.

II. Objectives of the Study

The study aims to explore the following objectives

- To explore various innovative teaching practices adopted by the teacher's education system
- To understand critical aspects of innovative teaching practices in teacher education.

III. Research Methodology

The researcher conducted an intensive search based on keywords in different academic journal databases and different reports published in the recent past in order to achieve an analytical study based on the title of the paper. After conducting an intensive study on various literature from selected papers and reports, the researcher presented a clear view on innovative teaching practice in teacher's education. After making intensive literature study based on the theoretical concept the researcher made a primary survey to know current state of innovative teaching practice used in different teacher training institute in Bareilly District of Uttar Pradesh.

IV. Innovative Teaching Practice in Teachers Education

The most significant difficulty for every teacher is to catch pupils' attention and convey concepts so that they stick with them long after they leave school. In order to do this, the teaching experience has to be reinvented, and creative concepts used to make teaching techniques more successful. So here are some unique approaches that assist teachers in adapting their learning methods and attracting attention to their courses.

1. Teaching through smart boards

Smartboards are set up in teachers' education throughout the country because this excellent technology improves teaching and improves learning for future teachers. It allows learners to have an enhanced learning experience with visual components projected. It also facilitates diversified learning since teachers can adapt to different methods of learning. It enhances the learning experience of learners with visual effects. The touch screen feature allows teachers to use their fingers to operate programmes. This makes it not just easy for the instructor to navigate but also for the learners.

Furthermore, learners' learning experience is increased by technology because of its capacity to see graphs, charts, movies, and more immediately on the big screen. Learning comes to life, and it is more exciting to learn than ever before for many learners.

One of the most appealing features of Smart Boards is their potential to be interactive. Learners learn better when they are wholly engaged, and one of the most effective methods to do so is via hands-on learning. Every learner in the classroom may now use the SmartBoard simultaneously, thanks to this technology. Learners can write directly on sophisticated Smart Boards using their fingers. Multiple individuals can use the smartboard at the same time because most Smart Boards feature separate workspaces. Learners can, write draw, or take notes on a tablet as part of this interactivity.

Smart Boards are simple to use and need little upkeep. You can't use chalk or markers on the boards since they're messy; instead, you can use your finger or a special pen. You'll also discover that they're straightforward to clean. Learners can easily access online materials thanks to intelligent technology. They may be set up in the classroom so that all learners can use a computer programme to watch any website or video. Teachers have access to a variety of valuable resources that might assist them in reinforcing their lectures. Learners have easy access to various materials that might assist them in completing an assignment or performing experiments.

Smartboards are suitable for the environment since they remove the need for paper. There is no requirement for a class set of documents to be photocopied and printed. These interactive panels will help remove the hundreds and tons of waste paper and ink discarded annually.

The ability to integrate technology is one of Smart Boards' numerous advantages. Teachers can link their computers, video cameras, digital cameras, microscopes, etc., to help with classroom teachings.

Images from a computer may be shown on a board using a digital screen. It may also be changed on the screen with a pen or a highlighter. Its touch screen feature allows teachers to launch programmes straight from the screen by just tapping the application with their finger, and it also allows for simple navigation. The Smart Board is the future technology, and it will permanently transform the aesthetic of classrooms. Smartboards in the classroom can help you keep on top of technology to make the educational process more accessible and more effective.

2. Teaching through flipping classroom

The flipped classroom is one of the most popular educational innovations in modern times. Is there something about a flipped classroom that distinguishes it from other methods?

A flipped classroom is a kind of integrated learning in which learners study the subject at home and practice working through it. This is the inverse of the more typical practice of teaching new information at college and then assigning homework and projects to be done independently at home by learners.

Face-to-face engagement is combined with individual study—usually through technology—in this blended learning strategy. In a typical Flipped Classroom situation, learners may watch pre-recorded videos at home before getting to class with questions and at least some background information to do assignments.

The flipped classroom notion is to rethink when learners have access to the materials they require the most. If the problem is that learners require assistance performing the task rather than being exposed to the new ideas underlying the work, the flipped classroom approach reverses that trend.

3. Teaching through collaboration

Instead of memorising facts and figures, this method actively involves learners in processing and synthesising information and concepts. Learners cooperate on projects with one another to grasp the information taught to them. Learners will obtain a more comprehensive knowledge as a group than they could as individuals by defending their beliefs, reframing concepts, listening to different points of view, and articulating their arguments.

Collaborative learning is one of the most adaptable and successful teaching methods available. According to research, kids are more likely to take on challenging activities, listen to other student's ideas, and applaud a peer's achievement and progress when they work cooperatively. Students' learning in all topic areas, including social studies, science, reading, and mathematics, can benefit from collaborative learning. Furthermore, research has demonstrated that learners must interact with others to develop the social skills they will require as adults.

Active collaboration necessitates a transition from controlling the learning of a particular set of students to collectively accepting responsibility for all students' achievement and well-being. Teachers' teaching, planning, and inquiry into teaching are changing due to innovative learning environments (ILEs). Still, practical cooperation needs a shift in mindset from "me" to "we" and "my learners" to "our learners" regardless of the teaching environment.

4. Teaching through virtual reality

In the digital era, we now have the ability to employ technology to better learning. Virtual Reality (VR) looks to be the next natural step in educational progress.

Virtual reality can help students learn and participate more effectively. Virtual reality (VR) education has the potential to revolutionise the way educational material is delivered; it works by creating a virtual environment — actual or imagined — and allowing users to view and interact with it. Immersion in what you're learning pushes you to fully grasp it. The data will be processed with less cognitive effort.

Due to VR's feeling of presence, learners can learn about a subject by experiencing it. It's easy to overlook that virtual reality situations aren't real; the body thinks it's somewhere else. This feeling has a lovely way of occupying the mind.

VR technology may be used to engage learners in areas such as geography, history, and literature by delivering a deeply realistic sense of location and time. Consider geography lessons in which you may travel to any area on the world; this type of experience is considerably more gratifying than merely reading about it.

Virtual reality simulations may also help students develop practical skills. One of the most enticing elements of this teaching technique is that students learn from realistic circumstances rather than risking practising a new skill in an uncontrolled real-life scenario.

5. Teaching through 3D printing technology

3D printing enables learners to access their work from the model stage to actual model design. This fosters both enthusiasm and more excellent knowledge of the design process as they learn from idea to creation. The distinct characteristics are easily visible when the learner constructs the project layer by layer. Excitement also comes from the opportunity, not simply on a screen or in a textbook, to investigate intricacies. 3D printing also introduces learners to the realm of physics theory, bringing up new opportunities for study and work.

3D printing can enable learners to work better regardless of what curriculum is utilised. 3D printing increases the ability of learners to be passive consumers of knowledge without any regard for productivity. In contrast to the typical classes where learners are quickly bored, participants are active and involved in the planning, designing, and implementing projects and interaction with the 3D printer and faculty.

The 3D printer offers students a wide range of learning activities. You must study how various 3D printers operate and how to fix and solve problems. This is an art that many learners construct while studying typically. Learners learn how to solve problems by solving 3D printers and continuing and resisting conquering challenges. This can also assist learners in addressing their life difficulties.

Feeding the imagination of learners can contribute to a passion that can then be utilised in business for their original thought and innovation. 3D printing encourages and prepares learners for their academic successes. Students acquire the trust to follow challenging courses, such as in the domains of STEAM. As learners know and expand their

imaginations, creativity is cultivated, in which students make their unique 3D creations to assist and educate others and solve issues.

6. Teaching through cloud computing

Technology has changed significantly in the previous ten years, and students study how cloud computing has changed. Earlier, instructors could anticipate and try to prepare jobs that the learners will have, but educators are no longer luxurious. By integrating valuable technology into the classroom, both students and instructors will experience better results and more commitment.

Today, learners must leave the course and grasp the essential abilities to create, work together, think critically, and communicate coherently. Cloud computing is one method to promote an atmosphere of innovation in institutions. Cloud computing provides innovative potential and safe and cost-effective benefits in classrooms.

Cloud computing encourages the ability of all users to adapt. Teachers can link their learners to various programmes and apps to inventive in their master's degree programmes. For example, by uploading a video, taking a photo of a work they have created, or sharing a document they have written with other learners, they can reply to their work. The cloud allows learners to use their voices and choices in demonstrating their learning and using several technologies. The cloud enables teachers and learners to adapt jobs to the particular needs of a learner.

The 21st-century classroom needs greater flexibility in design and structure since technology shapes and changes future occupations. Professors may also use cloud computing to develop new and creative classroom arrangements. The cloud streamlines innovative classroom models such as flipped or blended classes. Both approaches offer more face-to-face contact with learners while using the cloud for home instruction and tasks. The cloud helps build an inventive, genuinely contemporary classroom.

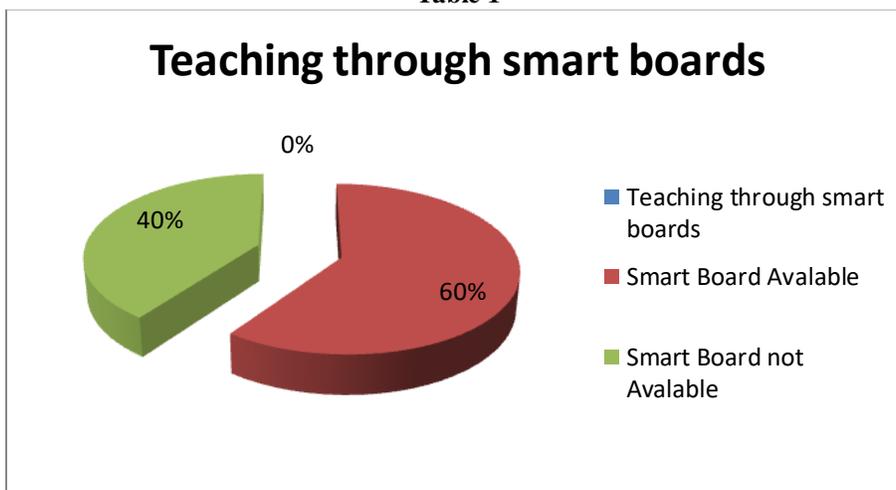
Result and Discussion

After making intensive theoretical study the researcher made an attempt to find out current state of innovation practice in teacher education in Bareilly District of Utara Pradesh. For this research the researcher selected 20 Bed and Med colleges as sample. The result of the survey is stated below

1. Teaching through smart boards

From the table 1 it has found that 60% of the teacher training institute are using smart boards in their class room and 40% of institutes are not having Smart Board facility

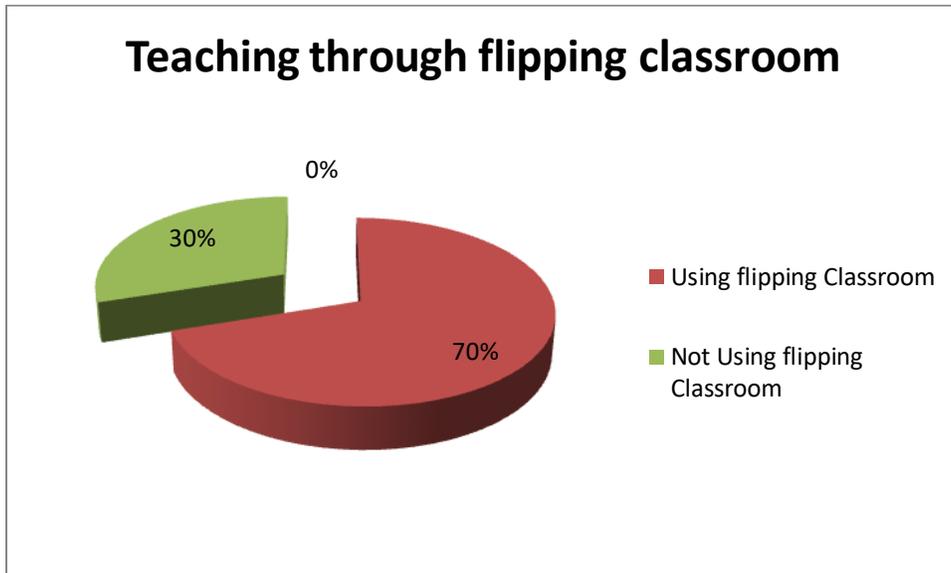
Table 1



2. Teaching through flipping classroom

From the table 2 it has found that 70% of the teachers training institute are providing teaching through flipping classroom in their institute and 30% of institutes are nothaving flipping classroom facility in their institute.

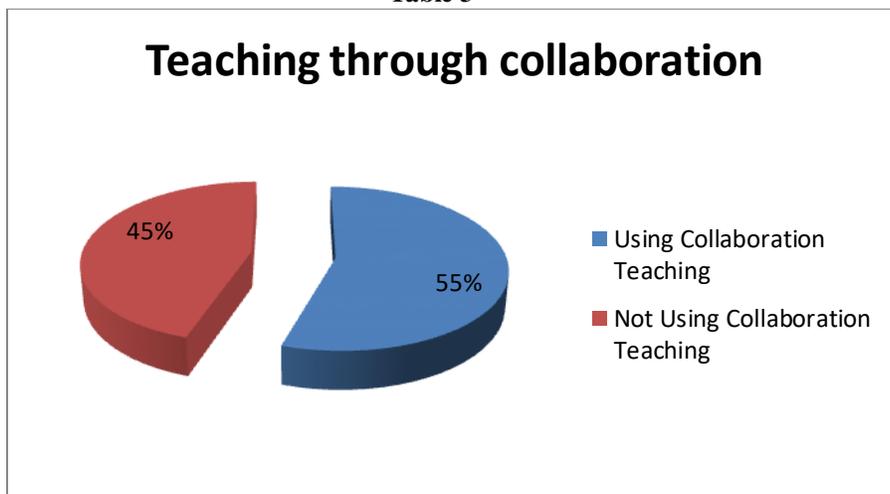
Table 2



3. Teaching through collaboration

From the table 3 it has found that 55% of the teachers training institute are using collaboration teaching methodology and 45% of institutes are not using collaboration teaching method in their institute.

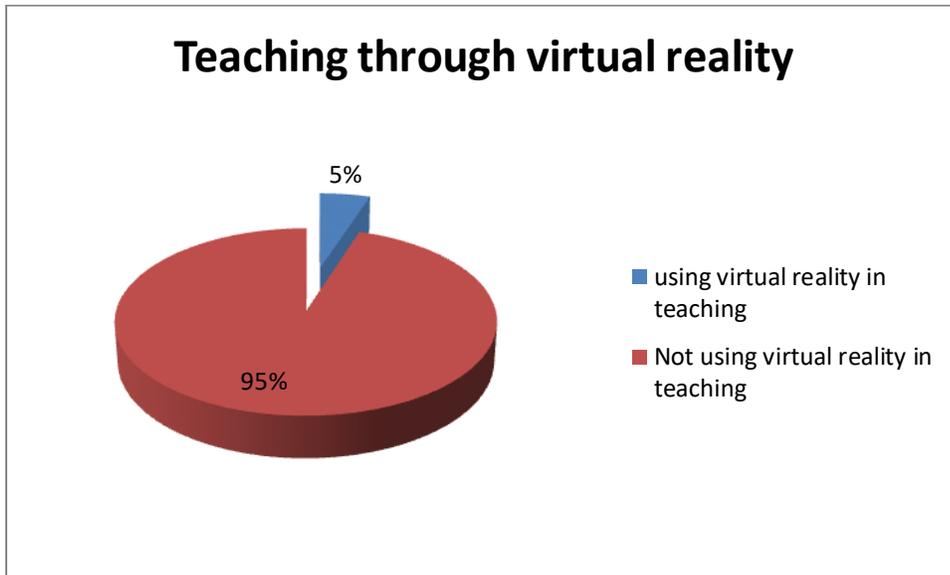
Table 3



4. Teaching through virtual reality

From the table 4 it has found that 5% of the teachers training institute are using virtual reality teaching method and 95% of institutes are not using virtual reality teaching in their institute

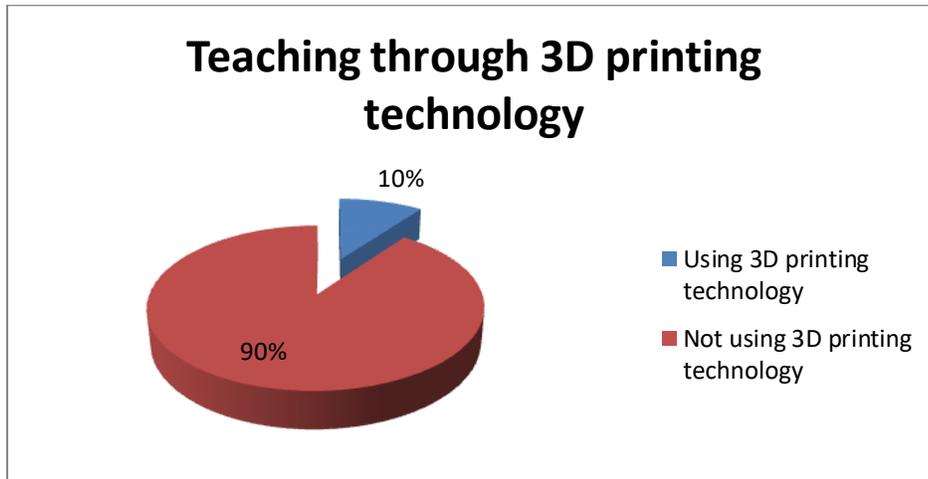
Table 4



5. Teaching through 3D printing technology

From the table 5 it has found that 90% of the teachers training institute are using 3D printing technology in teaching and 10% of institutes are not using 3D printing technology in teaching in their institute

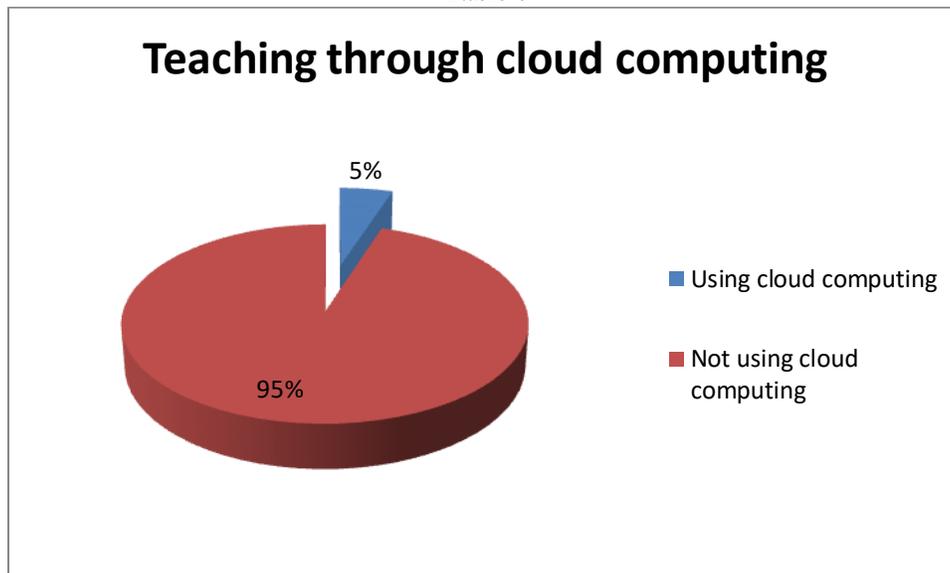
Table 5



6. Teaching through cloud computing

From the table 6 it has found that 5% of the teachers training institute are using cloud computing in teaching and learning practice and 95% of institutes are not using virtual cloud computing technology in their institute

Table 6



Conclusion

A teacher education system is a critical tool for raising educational standards. The revival and development of the country's teacher education system is an important tool for improving educational standards. Several concerns must be addressed immediately to improve the quality of teacher education programmes. One of them is the need for new approaches to teacher education. Innovativeness is defined as the capacity to think outside of the box and create something new and distinct from what currently exists. There can be no development without invention. Teachers must be creative, and their development must begin in their educational institutions. Digital literacy, collaborative teleconferencing, and other innovations in teacher education are examples. The current teacher education system needs to be updated or modernised. Unfortunately, it is said that India's secondary teacher education institutes are mainly non-innovative. There are specific barriers in our educational system that prohibit teacher education institutions from becoming creative, such as a lack of physical facilities and resources, a lack of dissemination of innovations among teacher educators, a restrictive framework, and a lack of research orientation, to name a few. The authors of this study have attempted to shed light on some of the necessary creative practices for teacher education.

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