The 21st Century Classrooms in India

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Abstract: *The twenty-first century is a time of innovation and cataclysmic change.(Puranik 2020).India has a tremendous need for employable workforce and the New Education Policy (2020) is focusing on providing the industry specific skills to the students. Skills like critical thinking, problem solving, teamwork, innovation, digital literacy, and flexibility (Herodotou et al, 2019) need to be developed through innovative teaching methods. The nurturing of these employable abilities requires a shift from fact based traditional teaching to interactive learning. Each and every teacher tries to bring out the best in their students through creative teaching and evaluation techniques. Keeping in mind the pace of learners, the teachers use variety of tools in the classroom (physical or online). The pandemic has forced us to move from normal physical classrooms to Google classrooms and adapt hybrid style of learning. (ISR Report 2022).To enhance the necessary abilities of the teachers and students, the most effective techniques for teaching and learning must be found. The paper discusses the techniques and tools used by teachers for making classrooms more engaging. It is said that in order to develop fresh concepts or a method to unearth something new, teachers and students must be proactive in their research, exploration, and usage of a variety of tactics.(Sinha). The researcher focuses on bringing out the widely used and popular ICT applications, use of new methods and evaluation techniques for the benefit of the students.*

Keywords: Innovative teaching tools, employability skills, evaluation methods

I. INTRODUCTION

According to NEP 2020, instruction must be comprehensive, integrated, inclusive, entertaining, and engaging. At all levels of teaching-learning process, the curriculum, textbooks, pedagogy, and assessment must be changed in order to reduce rote learning and promote holistic development of the learners. Twenty first century skills like critical thinking, creativity, scientific temper, multilingualism, problem solving, ethics, social responsibility, and digital literacy are to be inculcated through innovative pedagogical tools. It emphasises the adoption of experiential learning at all levels, including studies of the relationships between many disciplines, hands-on learning, arts- and sports-integrated education, and story-based pedagogy, among others, as standard pedagogy within each subject. Classroom activities will change to competency-based learning and teaching to address the achievement gap in learning outcomes. (NEP-2020, Paragraph 4)

There is a common belief that educational systems should equip students with the knowledge and abilities needed to adapt to a world that is always changing. (Herodotou et al., 2019) The higher education system in India is undergoing a radical change post pandemic and with new regulations of education policy. To be innovative, creative and interactive, today's educaators need to make tactful use of ICT applications, social media and Learning Management systems. (Huda et al,2016). The major focus of 21st century classrooms will be the students. The students need to collaborate, actively participate and gain mastery over the concept rather than rote learning. The aim of this research paper is to bring out the new techniques available to the educators for ensuring that the students are just not passive listeners but are active learners.

The paper will discuss the following issues: 1) Employability skills (ISR 2022); 2) Innovative practices used in classroom (Kalyani and Rajsekarn, 2018); 3) Evaluation techniques (Yilmaz). The outcome of any education is to not only give concept knowledge but to make the person employable. The skills needed for earning a livelihood are to be inculcated through education. For being employable there has to be a strong relation between the curriculum designed, the way in which the content is delivered and the assessment are done to ensure that the content is delivered successfully. The paper will thus try to put forth the ideas to establish a way to attain the same.

The majority of new professions expected to be generated between now and 2030 are likely to require a combination of social intelligence and creativity in particular. These abilities not only provide people a distinct advantage over software and machines, but they also provide defence against the growth of automation, making occupations "future-proof." Future employment opportunities will also be more in demand for those with strong ICT and mathematical aptitudes. Individuals who possess the ability to combine mathematical and technological skills with creativity and/or social intelligence will have even greater job chances and protection against automation. (ISR Report 2022)

Indeed, the pandemic has shown us that remote employment, remote education, and remote evaluation will soon become standard across a variety of industries, including IT, business consulting, financial services, and, most importantly, one sector that is already driving the pace: the education sector. The academic continuity of higher education institutions can be maintained even when colleges are closed.

Up skilling is crucial for employment since knowledge-based economies require new sorts of labour, such hybrid models. Whether it is in the field of education or business, innovation and the spread of knowledge are at the core of the growth process. Therefore, ongoing innovation is essential for all educational institutions. Students should be able to think critically and creatively in order to succeed in the twenty-first century.Given the ongoing changes in higher education's environment, quality teaching has grown in importance. The student body has significantly grown and changed, both geographically and socially.
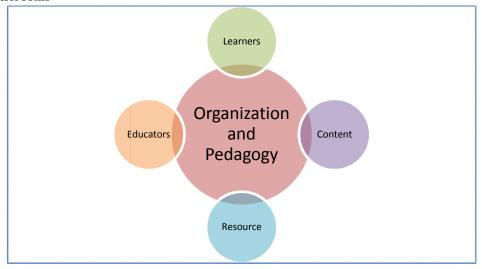
Different students necessitate new teaching strategies. The use of contemporary technologies in the classroom has changed the way that students and teachers engage with one another. All the stakeholders i.e. parents, governments, employers, fund providers and students want more value for their money and want teaching to be more efficient. (Tirath, 2017) The responsibility hence lies on the institutions'' administrators to ensure that their classrooms have the necessary infrastructure and the teachers are trained to make the teaching-learning process effective.

Keeping students' attention and conveying information in a way that will stick with them long after they leave the classroom are the biggest challenges for teachers. In order for this to occur, the classroom experience needs to be rethought, and new approaches to teaching and learning need to be put into practise. (Kalyani, Rajsekaran, 2018)

The ISR Report (2022) bring out the fact that strategic thinkers and leadership professionals are in high demand. To ensure that we develop the students in this way, the teaching-learning process is undergoing a change in terms of not only classroom teaching but also in evaluation methods. Following are few methods which are being used by educational institutes in India:

1.1 Innovative Methods used
A. Flipped Classrooms

Source: Adapted from OCED 'Innovative Efforts for Universal Quality Education'', 2014

When the students need to develop certain skills while working, or few students who cannot attend physical classes due to certain issues, flipped classrooms can prove to be of great help. When we are taking about flipped classrooms or innovation in teaching we need to consider the stakeholders i.e.- the teachers or educators who will be at the forefront in

delivering the knowledge, the learners (who will belong to all levels of socio economic strata as well as different paces of learning) and the resources and technology used to be deliver the knowledge.

Dr Susanne Owen (2014) in her presentation on "Evaluating innovative education practices impacts and systems diffusion approaches" has carefully brought out the innovative practices and its chaging form in Austalia. She has not only charted out the path for building and effective sytem of teaching-learning bu also has taken into consideration the traininig of tecahers and learners profile. Taking cues from the model, one needs to build our own methodologies based on whatever resources we have, consider the learner profile and our strengthen our skills as eductaors to ensure that the NEP 2020 objectives and industry demands are met.

B. Hybrid Learning

A fluid learning environment that combines in-person instruction with online resources and exercises is what the hybrid approach aims to achieve.During the outbreak, commercial video conferencing services let teachers to switch to remote instruction by, for example, streaming lectures and seminars online.Although this may have given students more access, teachers still required support in improving the instructional designs of their courses. In new types of hybrid models that are now being investigated, students have the option of participating synchronously and/or asynchronously online or by attending classroom sessions.(Kukulska, Hulme et al, 2022)

C. Multimedia Tools

The teacher's use of multimedia technologies allows for more meaningful portrayal (Jayashree,2017). Multimedia technology includes things like PowerPoint presentations,YouTube instructional videos, Gyan Darshan broadcasts, NPTEL video lectures, SWAYAM courses, MOOCs, etc are being widely used to strenthen the lecture method of teaching.

Apart from the regular powerpoint presentations, the teachers can make use CANVA, use creative templates, Prezi video to make the presentation more creatively engaging.

Google allows an educator to create a real time interactive presntation through PEARDECK , where one's regular slides can be converted into meangingful, evaluative and interactive session. These allow you to add evaluative questions (MCQ and one answer or even draw) so that a teacher can get real time feedback about the concept clarity of the students.

1. **Use of Short videos in the lecture**: Educatoros can make short animated videos through **Renderforest, Animaker, Canva or Powtoons** to make there teaching more fun. These videos can explain the concept in a more easier way and also get the attention of the students. There are many apps can be used to make small films and these can be given as activities to students. This will foster creativity, team spirit and engage students in a holistic learning enviornment.

2. **Active Learning through Role plays and case studies**: When students engage with the educational material in any way that can inspire active cognition, which motivates them to think about the material rather than simply recite it, active learning is achieved. There are numerous active learning strategies available. Active learning can be incorporated into already created lectures in their most basic form. (Puranik 2020) Case studies can develop critical thinking, decision making and team skills while role playing can develop communication and interpersonal skills.

Insert Learning extension by Google chrome is yet another mode of making classroom teaching more interesting and engaging. The educator can use any web link or web page and highlight paragraphs and add evaluative questions for students to answer. The teacher can deliver the lecture and give this as an activity for students.

1. **Evaluation techniques**: The knowledge or abilities that students have attained by the end of a learning period are known as learning outcomes. (Zao et al, 2021). Cognitive, emotional, and psychomotor domains were the three areas of learner achievement included by Bloom's taxonomy (Bloom et al., 1956). When using innovation in classroom, one needs to esnure that we use creative methods in evaluating the learners.**AHA slides, Mentimenter, Kahoot, Quizizz, Sildo, Prezi, Pear Deck** allow the teacher to take the much dreaded evaualtion to the next level and help achive the goals. **Case based questions** allow the students to apply the theories into pratical concepts. Many uiniversities and institutes have adopted the application based evaluation

for ensuring inculation of higher order skills like design, compare and evaluation of concepts based on students knpwledege.

The effectiveness of these innovative teaching methods lies on three things: availability of internet and appropriate devices for educators and the learners; knowledge of when and where to use the tools and learner readiness. An educator can consider these points when he/she is designing and developing a course curriculum (for university or value added course run by institutions), lesson plan or even arranging for a workshop or activity or competition for the students.

II. CONCLUSION

Change is the only constant in the world and the higher educational scenario is changing rapidly. Many significant changes have been made in the higher education teaching in Indian universities. While the traditional lecture based method is still largely prevalent in many parts of the country, the number of institutions who have adopted cutting-edge technology is increasing day by day. Teachers are trained through various faculty development programs, orientation and refresher courses to use modern teaching techniques. Hybrid modes of teaching, Flipped classrooms, significant use of MOOCS and online learning sources being are being heavily relied on by not only the teachers but also by the students. Training of educators is at heart of this system as more the educator is aware of the modern methods of teaching-learning process; he/she will make the classrooms appealing to the students. The paper has brought out only a few modes of making 21st century classrooms and ways to deliver the knowledge through apt use of traditional and modern methods of teaching.

"The first step in teaching students to innovate is making sure that educators have opportunities to be innovators themselves." - Suzie Boss, Bringing Innovation to School: Empowering Students to Thrive in a Changing World.

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