Pandemic, policy, and pedagogy: analyzing the tripartite role of COVID 19 pandemic, National Education Policy 2020, and pedagogical innovations vis-a-vis educational implications

Aditi, Deepa Idnani*
University of Delhi, New Delhi, India
*e-mail: eduspm2014@gmail.com

Abstract
The paper draws interlinkages between three factors, i.e., COVID-19 pandemic, the release of National Education Policy (NEP), 2020 by the Government of India, and the need for pedagogical changes and innovations concerning their educational implications the Indian context. The paper argues that COVID-19 pandemic has been a major setback for the ailing academic infrastructure in India. The immediate outcome might cause the severity of the pandemic and the increasing cases of infections across the nation, and the closure of schools and other educational institutions. However, to overcome further educational losses and compromises, the schools and colleges alternatively moved to online modes haphazardly. Ever since this transition happened, everyone has been trying to adapt to this new 'normal'. Despite the relentless working of stakeholders at various levels owing to these unprecedented times, the situation does not look inspiring. Though NEP 2020 was envisioned as a sigh of relief and a major game-changer in metamorphosing the educational system in India, particularly the learning gaps induced due to the ongoing pandemic. This paper attempts to investigate the dynamics of the major debates emerging as a result of the anxieties and upheavals posed by the COVID-19 pandemic: the response of various stakeholders such as administrators, policymakers, teachers, educators, learners etc. and the pedagogical implications for the teachers and educators due to these uncertain circumstances.

Keywords:
COVID-19 pandemic; education; National Education Policy 2020; crisis management; teaching-learning; teacher professional development; pedagogical innovations.

1 INTRODUCTION
The paper draws interlinkages between three factors, i.e., COVID-19 pandemic, release of National Education Policy (NEP), 2020 by Government of India, and the need for pedagogical changes and innovations concerning their educational implications in the Indian context. The paper argues that the COVID-19 pandemic and NEP 2020 laid the preparatory grounds for innovative pedagogical approaches to tide over the current crises and as a serious consideration for the future. Before the pandemic, the efforts calling for ICT, digitization and technology integration in classrooms and pedagogies were not admissible to the teachers in the Indian context. Technological use in education was perceived as a major site of contestation. However, a pandemic has been a major harbinger in softening this rigidity in outlook towards the technology integration into their pedagogies and awareness regarding the contemporary challenges in the 21st-century classrooms. A major development during these critical times was the roll-out of National Education Policy, 2020 with high-stake investments by the Government of India in July 2020 after a long wait of 34 years which was seen as the only positive aspect to overhaul the Indian education system in its entirety.

The disruptions caused due to the COVID-19 pandemic, as well as the aspirations set by NEP 2020 for the coming years, have critical ramifications for the teachers and their profession. Hence, there is a huge onus on them to equip themselves owing to these changed circumstances to remain relevant. Time has come to explore the virtual or digital world further by expanding the ambit of the teaching-learning process beyond the traditional classrooms and pedagogies to normalizing the virtual world in a blended and holistic way. While the ideal suggests the need to explore these new alternatives to transform educational experiences, one cannot remain oblivious to the ground realities. Therefore, this transition is not an easy one. There is a need for proactive engagement and training of educators and learners along with required support. In order to bridge the gap between what we aspire for and how much effort we are putting in to make it a reality. Thus, keeping all these challenges and factors along with their educational implications into consideration, the paper has the following objectives: (i) To explore the impact of 'COVID 19' through major debates emerging in the domain of education (ii) To develop an understanding of the dramatic turn of events as a result of the COVID 19 pandemic and the response of various stakeholders such as administrators, policymakers, teachers, educators, learners etc. (iii) To examine the pedagogical implications for the teachers and educators owing to these uncertain circumstances and finally, to derive insights and strategies that will help in making the educational system more resilient, resource-rich and prepared to tackle future crises.

2 DEBATES AND CONTEXTUAL FRAMEWORK
This section seeks to contextualize the major debates that appeared from the anxieties and upheavals posed by the unprecedented COVID 19 pandemic, further exposing India's already ruptured education ecosystem and the need to adapt to the changed realities.

2.1 A Lost Opportunity to Innovate and Re-invent
Academics and scholars argued that the pandemic allowed administrators to re-examine the education system, but nothing has changed, and an unforeseen opportunity to innovate was lost. Notwithstanding the pandemic unleashing in
full force, the debates since the last year have aided the inadvertent deliberations over possibilities of holding and postponing examinations instead of looking for alternatives to get out of this situation. Moreover, the response from the administration came in the form of a flurry of announcements calling for reduction in the portions, indefinite postponements, cancellations, and automatic promotions. It is further argued that viewing this unprecedented situation as a signal for urgent change was uniquely suited to initiate sustainable reforms in the structure and design of the academic term, like continuous assessment. Furthermore, it provided an opportunity to work collaboratively with various stakeholders and addressing their concerns and insecurities. However, it is unfortunate that this opportunity was not adequately harnessed by engaging with these core issues.

### 2.2 The credibility of the Exams and the Mode of Assessment

Examinations constitute a critical component of our curriculum system. However, assessing students amid a pandemic and what methods could be employed for evaluation after the cancellation of exams had led to a state of confusion. The ongoing pandemic offered an opportunity to develop multiple evaluation designs for different levels. However, instead, as argued by Gopalan (2021), the system’s reliance on rote learning, inability to acknowledge that exam results are not the only indicators of a student’s talents, and unwillingness to collaborate with colleagues, academicians, and teachers to foster academic engagement the exam system, which has been in desperate need of reform, could have been reformed and re-imagined. It was necessary to relieve student pressure and prevent them from memorizing to prepare for set and repetitive exam questions. Continuous examination and evaluation of students should have been prioritized. But instead, the authorities were more focused on figuring out some way or the other to conduct the traditional exams or at times waited for the restoration of the degree of normalcy conducive for physical tests to take place.

### 2.3 Internet: Accessibility, Affordability, and Exclusion

The concerns regarding access and affordability amid pandemics afflicted the teachers and learners alike. Virtual learning seems to be a case of mechanical exercise without leaving any space for contemplative or meaningful ventures, and that too at the expense of their health and well-being due to continuous exposure to screens and additional dent on scant financial resources. As access to education in the wake of the pandemic has taken an online turn, it has posed some serious implications. The low internet penetration in India further justifies the less-than-efficient achievement in the digital education sector and negligible Edtech initiatives in rural areas where online access to education is still an aspiration and further pushing the children into deeper marginalization. Even in the urban areas and metros, the situation is not conducive to teachers and learners experiencing poor connectivity. In addition to patchy internet connectivity, students also had to compromise on a various internship or extracurricular opportunities, struggled in finding a conducive place to study and give online exams in their homes, missed out on the ‘holistic’ exposure and experiential learning they could have gained otherwise plus bleak job and placement prospects. Students from across varied age groups witnessed the loss along with the digital divide due to online classes and further regarded it as exclusionary and against the interests of a vast majority.

### 2.4 Online vs. Offline Teaching-Learning Experiences

Given the pretext of online education becoming the norm, Jesudasan (2021) argues for the need to consider whether the students can imbibe certain subtle lessons and non-negotiable values such as punctuality, discipline, and sincerity in the virtual model. The condition is often communicated and imparted subtly by the teachers during physical classes, and whether a teacher’s true potential, talents, and skills are harnessed to the maximum in the virtual environment? Although online classes can achieve the target of having finished covering the syllabus, the students studying at premier schools or colleges felt having missed out on the invaluable exposure and experience they could have gained from the institution for which many of them paid high fees. The vibrant discussions and conversations in classrooms are often absent in online classes. Subsequently, depending solely on the online mode ought not to turn into the new normal. While teachers and learners have mixed responses to this development, the blended/hybrid model (the best of both worlds, i.e., online and offline) is the smartest possible solution not just to tide over the current situation but as a genuine alternative for the future. Similar reckoning is also upheld by the NEP 2020, which further reinstates the importance of blended learning models.

### 2.5 Teachers vs. Technology

Debates regarding the increasing developments in artificial intelligence and technology in the domain of education obsoleting the role of a teacher are not new. A well-known saying in the education world that is uniquely suited to these changed circumstances is that ‘technology cannot replace a teacher, but a teacher who uses technology will replace one who does not’. Nonetheless, the pandemic has demonstrated that instructors, technology or not, cannot be replaced. Notwithstanding, the supposition that digital skills and the utilization of technology are normal among teachers in India is not correct. Dharmaraj and Lightfoot (2021) studied the photographs of teachers utilizing everyday items like clothes hangers to hold up phones and film movies in the aftermath of the outbreak, while others offer the latest and most polished online tools to keep their kids motivated and involved. This shows that teachers and educators in India needed significant support, development, and standardization to enable and facilitate the remote teaching and learning process effectively.
3 THE DRAMATIC TURN OF EVENTS AND MAJOR UPEAVALS

This section deals with the dramatic events consequent of the pandemic's wrath, misplaced priorities, and choices. The pandemic has demonstrated the frailties of our existing procedures. In these testing times, the response of the power structures was untimely and inconsiderate to the underlying situation, further deepening the crisis and anxieties.

3.1 Uncertainties Amid Chaos

Sahadevan (2021) argued that our traditional educational practice encourages a mental model of certainty, but the pandemic contradicts the false certainty assumed in a written syllabus. Likewise, the resorting to the same responses as the previous year, i.e., indefinite postponements, cancellations, and fixation with the completion of the academic term, is at the heart of the contemporary debate, which has learned no lessons from the past year and lost an opportunity to re-invent.

3.2 Administrative indifference

The response from the authorities not only undermined proper and constructive academic interaction between teachers and students but also exposed everyone to new levels of distress. While teachers conducted online classes daily according to the prescribed timetable, authorities showed meagre interest in enquiring about the health and difficulties of their colleagues and staff and neglected the initiatives to gauge teachers' mental health, non-teaching staff, and students. They failed to interpret the qualitative and operational transformations between online and offline classes and further exposed their outdated understanding of technology alongside the contemporary challenges of classroom interactions.

3.3 Teachers' Angst

In the backdrop of the COVID 19 pandemic, teachers were exposed to a heightened level of distress. Apart from the push for online classes and assessments without relevant exposure and training to assigning COVID 19 related duties posing a greater risk to their health and lives.

3.4 New vulnerabilities — Wrath of Pandemic

The pandemic has been catastrophic for a number of reasons. However, the most ravaging aspect was the creation of new vulnerabilities in society, thereby leaving most people without jobs, work, family members or loved ones, new exclusionary modes of learning, heightened mental and psychological trauma, and the instances of alienation and loneliness. The pandemic has critical sociological, economic, and psychological implications on the mental and emotional well-being, family structure, people, / parents having lost their jobs and source of livelihood, and the children orphaned due to the pandemic.

4 TOWARDS RESILIENT, RESOURCE-RICH, AND WELL-PREPARED EDUCATION STRUCTURES

The assumption that this phase of uncertainty is transitory in nature may prove to be detrimental considering its long-term implications. Instead, constructing it and taking this as a humbling moment for education change may result in seamless learning. The pandemic has shown that traditional education structures may become obsolete and require radical solutions and pedagogical changes to remain relevant. Therefore, it is imperative to further re-imagine learning by deploying strategies and pedagogical innovations towards making the education structures more resilient, resource-rich, and prepared to tackle future crises and emergencies. This section particularly deals with these considerations keeping in mind the voids created by the pandemic, aspirations of National Education Policy, 2020, and the need for pedagogical innovations.

4.1 Ensuring Equitable Use of Technology in Online/Digital Education

NEP 2020 takes cognizance of the new circumstances and changed realities and the reckoning of the recent rise in epidemics and pandemics necessitating the readiness with alternative modes of quality education to fill-in the unavailability of traditional and in-person modes of education. It also recognizes the importance of utilizing technology's benefits while acknowledging its potential dangers and risks and calls for carefully planned and appropriately scaled pilot studies to determine how to reap the benefits of online/digital education while addressing or mitigating the disadvantages. Meanwhile, existing digital platforms and continuing ICT-based educational efforts must be improved and expanded to meet present and future challenges in providing high-quality education to all students. The advantages of online/digital education cannot be reaped unless the digital divide is eliminated through concerted efforts. NEP 2020 further reinstates that equity concerns should be adequately addressed while utilizing the technology for online and digital education (NEP, 2020).

4.2 Renewing Focus on the Teachers

Bhanj and Ghosh (2021) argued that as ways of teaching continue to undergo major transformations in the aftermath of the pandemic and the particular challenges it poses to the traditional education system, it is more necessary than ever to strengthen educators' skills. Therefore, a teacher's role today has to adjust its focus to honing and nurturing the 21st-century skills among the learners which they require in order to be effective and relevant in a fast-evolving world and further acquaint them with greater possibilities that underlie in the future. Thus, NEP 2020 necessitates the importance of quality teaching and further makes teachers the social transformation leader. Focusing on learner outcomes is important; however, for the education systems to be truly effective and successful, the teachers and educators need to be fully equipped and well prepared to deliver these aims. Further, educators and teachers will have to find ways to up-skill their engagement strategies while integrating technology into their pedagogical approaches. Vincent (2021) argued that technological tools are forcing us to remain consumers rather than become creators. Thus, as a solution, NEP 2020...
emphasizes rigorous training of teachers in learner-centric pedagogy and making them adept as high-quality content creators while utilizing online teaching platforms and incorporating digital tools in their pedagogy.

4.3 Collaborative Classrooms
Alongside developing technological skills among teachers and educators, constructing a collaborative classroom equipped with creativity, innovation and engagement is equally substantial. To make this happen, teachers should be provided with requisite training in empathy, emotional intelligence, and leadership which would further add to overall well-being and cultivates a strong teacher and student relationship. Therefore, continuing professional development of teachers is imperative to further innovate and engage creatively with the students. Additionally, the power structures impacting teachers, as argued by Bhanj and Ghosh (2021) that it needs to be disassembled and a participatory approach to be established where teachers are given more agency. Thus, allowing them to be creative and imaginative and further grant them the freedom could interpret the syllabus and take more ownership of their professional development as per their specific needs.

4.4 A Global Perspective
While the National Curriculum Framework 2005 argues for the importance of local contextualization, the issues and ideas relevant to the course of study must also be discussed and investigated from a global perspective. Teachers must redesign their teaching aids and materials to enable issues to be explored from a wide variety of perspectives—local, national and international. Dharmaraj and Lightfoot (2021) suggests that their expertise must be developed to offer a bigger picture to the students and further prepare them to be part of a global workforce in an ever-shrinking digital world. NEP 2020 also advocates institution-led internationalization. Researchers and educators in India’s higher education institutes are further ruminating on the scope and potential of the internationalization of Indian education.

4.5 Developing Critical Thinkers and Thinking Classrooms
The need of the hour is to facilitate critical thinking and practical skill-based pedagogy in curriculum and strive for a greater social transformation rather than emphasizing only over ineffective rote learning system. In this context, the recent NEP 2020 suggestions are highly appreciative, focusing not only on the need for the flexibility to learn but also on hopes for critical thinking as the basis for designing the curriculum. The NEP 2020 promises to integrate problem solving and critical thinking skills in the curriculum from the foundation level, creating a new generation of creative thinkers and critical writers who will help prepare to tackle the upcoming life reality and will also be useful to conquer the uncertainties of future. Here, the role of teachers is very imperative. The teachers will create such an opportunity to the same values of critical perspective and innovative thinking process in their respective classroom teaching. As Khan (2021) argues, creating classrooms where multiple perspectives are debated and discussed critically and reflectively is imperative towards nurturing 21st-century global citizens. A major question that arises is: how prepared and equipped are we to implement these changes, especially amid the COVID 19 pandemic? There is a need for introspection at each level and critical reflection on our teaching pedagogical approaches. Furthermore, educationists and policymakers must think creatively to develop strategies suited to these changed circumstances.

4.6 Critical Disparities
Multiple institutions in India have been able to replicate the actual physical experience of campuses in the virtual world through pedagogical innovations and technology to drive social engagement among learners. However, not all universities and institutions in India are well equipped or resourceful to carry out such experiments in the online space. Thus, to meet these challenges, close gaps, and give a reasonable holistic academic experience to the learners.

4.7 Addressing the Loopholes and Taking Cognizance of Ground Realities
Considering this crisis as a sign for urgent change, core issues need to be addressed and re-evaluated to prevent students from being stuck in the regressive system of cramming rote learning and anxiety. There is no disagreement among experts that there is a need to provide complete autonomy to educational committees composed of students, teachers, educational leaders, scholars, and researchers who can advocate, organize, and implement the required changes at national and international levels. Likewise, policymakers should also regard the involvement of teachers as significant stakeholders in their planning. Moreover, to recuperate the system further, the collaborative efforts from both the Central and State educational boards should be encouraged in providing the necessary support and timely feedback as well as further pave the way for a more democratized and decentralized decision making. Kumar (2021) suggested that young leaders need to be nurtured to engage with underlying national challenges and constantly add value by advocating for and sustaining the fabric of a diverse and non-stratified India. With the emergence of digital technologies and the underlying importance of leveraging technology for the teaching-learning process at all levels from school to higher education, NEP 2020 recommends Pilot studies and research in the relatively under-researched area of online education in the Indian context to evaluate the benefits of integrating education with technology and conducting research in related areas including—student device addiction, most preferred formats of e-content, new ways of assessment using educational technologies based on 21st-century skills and so on. The results and findings of which will be publicly communicated and availed for continuous improvement. Apart from changes required in pedagogy, assessments and online assessments in particular also require a different approach. Further, unless online education is combined with experiential and activity-based learning, as argued in NEP 2020, it will mostly be a screen-based education with little emphasis on the social, emotional, and psychomotor aspects of learning.
4.8 National Education Policy 2020: Challenges

The National Education Policy (NEP) 2020 has been regarded as ground-breaking and progressive and perceived as much-awaited reforms to give the Indian education system momentum. Some of the provisions related to multidisciplinary and holistic higher education, flexibility in curriculum, The introduction of e-courses in regional languages, and adjusting to changing times by advocating for more use of technology are both positive reforms. However, it is erroneous to have a policy when there is a need to build a complete infrastructure that requires total reform and drastic redesigning while implementing the New Education Policy. It is to be highlighted that education is a concurrent subject, and the subsequent implementation of the proposal under the New Education Policy 2020 relies upon the future regulations by the center and states. Agarwal (2021) argued that the entry of corporates and private players into the education sector and allowing foreign universities to enter the country would definitely charge high tuition and increase the inequalities and incongruities in education further. As COVID 19 has put forward many challenges in front of the educational institutions and keeping these challenges and critiques into consideration, the clear and loud statement is that the government should not shy away from its responsibility to provide quality education for all.

5 Conclusion

The future of Indian education will be determined in large part by the support given to teachers and the initiatives they take in the coming years. The NEP 2020 vision will be realized through optimal technological and non-technical teacher training in topic expertise, student evaluation, and curriculum development. The extent to which this new policy will modify the country's demands will have to be assessed in the coming times. However, the tremendous work of preparing teachers as leaders and thinkers who can alter this sector from within begins from the outset. As a result, an emphasis on teacher development will eventually benefit the ecosystem: institutions, students, and the country. It must be understood that technology in education is a journey, not a destination, and that expertise will be required to orchestrate the numerous ecosystem stakeholders to achieve policy goals (NEP, 2020). Because technology is rapidly evolving and requires specialists to deliver high-quality e-learning, a thriving ecosystem must be fostered in order to develop solutions that not only address India's scale, diversity, and equity challenges. However, evolve in tandem with the rapid changes in technology, whose half-life is shrinking with each passing year. Indeed, recent papers have proposed the need to convert the worst crisis into a sustainable opportunity by breaking from the past and reimagining the world of education. With the unprecedented challenges such as COVID 19, post pandemic's educational relevance may be harder to predict; however, given what we know about the shift from the analog world to the post COVID world, we need to add value re-invent our learning models continuously.

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