TEACHING AND LEARNING IN COVID ERA

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PREFACE

We think it's important to begin by stressing that the COVID crisis has engulfed the entire world in the past several months halting all social, economic, business, and educational activities. We as educators have indubitably spent hours of reflection, sitting idle, appalling hours of teaching, and frustration since March and the same may be true for most of our readers.

Despite the lockdown, and personal and professional upheaval, work on this book has been a consolation, though at times encumber too- we incredibly are grateful to our chapter authors, for being the rock in this project when we fell apart. We've been very lucky in our partnership to find this sanity-check equilibrium.

The COVID impact needed a concrete action and wise decision to compensate for the damage that occurred to the students. Therefore, it doesn't just need the methods, approaches and practices that we have but needs action in response to the best methods, approaches and practices that we have. Educators have been working incessantly teaching remotely using digital platforms to enhance learning. It brought in the very idea to realize that all our chapter authors have fresh introspections to share about their own teaching experiences, given the 'new reality' that unprecedented, unparalleled and unexpected times have brought.

This book will help all the teachers, researchers, students, parents and communities. The COVID has altered the higher education landscape undyingly, in ways that remain to be seen. We firmly believe that teaching online experiences using technology and collaborations among the administrators, IT staff, students, researchers and teaching faculty more specifically, will be an effective avenue for navigating this new educational landscape. But we now wish and distinguish the need to state that explicitly, and repeatedly, across our book.

Therefore, we extend the offer of what we're terming a "Teaching and Learning in COVID Era" to each of our teachers, students, researchers and chapter authors. The incredible work in the chapters speaks volumes about its transferability to current pandemic situations. We appreciate the time that all

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our authors took in the original chapter compositions of this book, to frame their work in a way that will make it most helpful to the teaching and learning community.

We're immensely grateful to our colleagues who took this plunge into the unknown with us, and all that we've discovered and shared in this book. We remain excited about all the educational problems, solutions, models, implications, and suggestions teaching online using digital platforms this book puts forth, and know that they're the tip of the iceberg for what is possible in the challenging and testing times. Whatever lies ahead across higher education in post-COVID, blended learning (partially online and partially face to face) will be a positive path forward through it.

Dr. Savita Mishra
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SAMPLE

Contents

	Prefece	*v*
	List of Contributors	*vii*
1.	Digital Platforms in Post-Covid-19: Transform Challenges Into Opportunities *—Dr. Vipin Sharma*	1
2.	School Education Scenario in India During Times of Covid *—Prof. Sharad Sinha*	17
3.	Review on ICT Enabled Education System and Impact of ICT on Teaching Learning in Current Covid-19 Pandemic *—Harshit Bhavsar*	25
4.	Empowering Education System Globally Through ICT in Pandemic Scenario *—Dr. Nimisha Elais*	31
5.	Convergence of ICT in Teacher Education: Little to Lose; More to Gain *—Dr. Chirag*	43
6.	The Era of Covid -19 Pandemic: Opportunities and Challeenges in Online Learning *—Jayashree Prasad*	52
7.	A Year of Wonders' Through Pandemic: (RE) Organizing Education System Worldwide Incorporating ICT *—Tamalika Karmakar*	62
8.	Challenges Faced by Learners and Teachers: Role of Teachers as a Friend, Philosopher and Guide to Learners Through ICT *—Mrs. Neeru Singh*	74
9.	Teaching -Learning of India During Covid-19 Pandemic *—Papiya Samanta Bag*	84

SAMPLE

10. Information and Communication Technology: Holistic Approach, Opportunities, Consequences and Challenges 95
—Dr. Prajnamita Dasgupta
11. Strategies to Continue Uninterrupted Education in Pandemic Scenario 103
—Dr. Ratula Mukherjee
12. Bridging The Teaching-Learning Gap Through ICT in Pandemic Scenario 110
—Subhankar Sarkar
13. Pandemic (Covid-19) and ICT in Indian Education 122
—Zubber Ahamed
14. ICT A Key Aspect of Teaching and Learning in Covid-19 Pandemic Scenario: A Brief Study 128
—Tapas Barman
15. Impetus for Providing Continuity to Teaching Learning Process During and After The Pandemic 132
—Binod Basnett
16. Online Education: Challenges and Solutions 143
—Sruthi. S
17. Covid-19 Pandemic: Enhances The Technological Skills Among The Teachers and Students 155
—Pushpa Mishra, Paritosh Mahato
18. Challenges Faced by Learners and Teachers During The Covid-19 Pandemic and The Role of Teachers in Handling it 161
—Prof. S.S. Charantimath, Prof. G.M. Navadgi, Prof. S.M. Khot
19. Teaching and Learning in Covid-19 Pandemic 171
—Dr. Sabita Mishra
20. Teaching Online: What to do and Where to Start 181
—Ms. Parama Kundu
21. Covid-19 and Education Pattern 186
—Mrs. Deepika Adhikari
22. Online Education in Pandemic ERA: Advantages and Disadvantages 192
—Nasiruddin Alam

SAMPLE

23. Attitudinal Difference Among Teacher Educators and Teacher Trainees Towards The Covid-19 in Educational System 198
—*Dr. Savita Mishra*

24. The Use and Perception of ICT in Education Among Students and Teachers: A Case Study of Shahabad Region of Bihar, India 208
—*Mr. Niraj Tiwari*

25. Challenges Faced by Learners and Teachers: Role of Teachers as A Friend, Philosopher and Guide to Learners Through ICT 218
—*Ms. Bula Dey*

26. Present Scenario and Future Prospect of Education System in Pandemic 224
—*Mr. Uday Modak*

27. Exploring Computer Science as a Tool of Teacher Enrichment in Teacher Education 234
—*Sabitha Mani, Joseph Mathew*

28. Challenges and Opportunities of Indian Education System During Pandemic 256
—*Mr. Mukesh Kumar*

29. During Pandemic May Online Education be The Panacea or not 269
—*Bholanath Majumder*

30. Strategies to Continue Uninterrupted Education in Pandemic Scenario 280
—*Dr. Tomina N S*

31. Social and Psychological Impact in Covid-19 ERA 291
—*Jayashree singha*

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DIGITAL PLATFORMS IN POST-COVID-19: TRANSFORM CHALLENGES INTO OPPORTUNITIES

Dr. Vipin Sharma

Abstract

The sharp pang of coronavirus has exponentially swept globally shutting doors of academic institutions. This abrupt unforeseen pandemic has forced teachers, students, and parents to reflect upon their decisions and practices and dictated the virtual delivery on digital platforms possibly overnight to facilitate students' learning across disciplines. The goal of the study as a whole is to provide policy-makers, administrators and educators with research-based guidance about how to best implement virtual online classes for students and teacher groundwork. The education system faces enormous challenges conduct virtual and digital learning. The article underscores the major challenges and opportunities the teachers and students perceive post-COVID and analyzing a few similar articles in an educational context. Finally, the suggestions are put forward to compensate for the damage rendered to students' learning trajectory as normalcy retains giving implications of the study in education to overcome pandemic problems.

Keywords: Digital learning, Virtual teaching, Curriculum, Assessment, Covid-19 pandemic.

Introduction

The coronavirus has terrifically affected everyone and made life hard to

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survive. The sharp pang of this virus has exponentially swept globally and has triggered fear, frustration, stress, and worried each one on earth. The pandemic brought in pernicious impacts on cognitive functions, physical and mental health. It has further shattered our daily routine, lifestyle, and all activities across disciplines. The sudden closure of schools, colleges, and universities globally has dictated the virtual delivery of courses and programs. Despite numerous inevitable teething problems, the researcher experiences if the future might just have become the present.

The role of the Information and Communication Technology (ICT) has suddenly seen a significant surge due to scrupulous isolation and lockdown measures shutting down all academic institutions across the world due to coronavirus pandemic. The unprecedented, unparalleled and challenging situations have brought the academic fraternity under insurmountable mental pressure elevating the dominance and rate of anxiety, depression, stress, and even neurological disruptions. It left with no options for teachers, students and users but to acquire digital skills to acquaint themselves with the distinctive rise of e-learning, whereby teaching is conducted remotely and on digital platforms. Further, the development of its tools, components, and the possibilities offered by ICT are deftly used in teaching and learning, thereby, helping improve the quality of learning and teaching at all levels across disciplines globally. The sudden shift from face to face (F2F) to virtual or online teaching has brought a rise in websites to assist teachers across the world in digitalizing teaching tools. Today, we witness virtual classes, educational videos, online exams, online worksheets/ assignments submission, meetings, professional development webinars, question-answer sessions, and individual help to develop digital pedagogical resources. The digital platforms help teachers and students improve their skills and boost their credentials staying.

Literature Review

There are not many studies carried out on the pandemic affecting education but the researcher tried to cover most given on the internet. Firstly, the articles online and e-learning are gone through to make the foundation of digital platforms. Frederickson, Reed and Clifford (2005) evaluated Web-supported learning versus lecture-based teaching, and Cavus, Uzonboylu and Ibrahim (2007) assessed the success rate of students using a learning management system (LMS) with a collaborative tool in internet-based teaching of programming languages. Lowry (2007) also highlighted the effects of online versus F2F professional development with a team-based learning community approach on teachers' application of a new instructional practice. Mentzer, Cryan and Teclehaimanot (2007) also analyzed a comparison of F2F and Web-

based classrooms. Zhang et al. (2006) evaluated the effect of interactive video on learning effectiveness. Zacharia (2007) compared and combined real and virtual experimentation to examine efforts to enhance students' conceptual understanding. A few studies (Bixler 2008; Chang 2007; Cook et al. 2005; Crippen and Earl 2007; Nelson 2007; Saito and Miwa 2007; Shen, Lee and Tsai 2007; Wang et al. 2006) studies the impact of promoting aspects of learner reflection in a Web-based environment improved learning outcomes. These studies found that a tool or feature prompting students to reflect on their learning was effective in improving outcomes.

Then, the studies based on computer-based instruction- the inclusion of quizzes, simulations (Castaneda 2008; Hibelink 2007), and techniques for individualizing instruction (Grant and Courtoreille 2007; Nguyen 2007) was carried out to see effectiveness in online learning. The incorporation of simulations produced positive effects in two out of three studies (Castaneda 2008; Hibelink 2007).

This research is part of a broader study of practices in virtual or online learning being carried out across the world due to pandemic. Richardson (2020) cited adequate digital equipment, insufficient broadband access, and poorly trained teachers amongst a broader set of issues that impacted children's right to an equitable, inclusive education. The goal of the study as a whole is to provide policy-makers, administrators, and educators with research-based guidance about how to best implement virtual online classes for students and teacher groundwork. But the researcher has a surprising finding of the literature search, nevertheless, there were a few published studies covering the various facets of digital platforms for learners. Because the search encompassed the research literature across disciplines, it yielded enough results with all learners to justify a qualitative analysis. Thus, analytic findings encompassing challenges and opportunities with implications for students' learning are reported here, but caution is required in generalizing to school learners because the results are derived for the most part from responses and observations in other settings (e.g., medical, engineering, business and higher education).

After the abovementioned introduction and explanation of the given subject, we would try to find out answers to the following research questions.

Research Objectives

- What are the major challenges teachers and students face in virtual classroom teaching?
- Do teachers and students foresee any opportunities in virtual/ digital teaching post-COVID pandemic?

- What do students miss and wish now?
- What are the implications and suggestions to be looked at post-COVID?

Research Methodology

The researcher adopts a flexible approach to delve deep collect vital information through webinars, workshops, one-on-one interaction, personal observations and considers the view of administrators and educators. The data is analyzed and arranged systematically in the academic context in COVID pandemic to put forth the major challenges the teachers and students face in virtual teaching and learning. Then, the researcher also tried to provide a glimpse of hope in opportunities arisen from the pandemic along with the future implications and necessary suggestions that have been discussed in the succeeding headings and sub-headings respectively.

Major Challenges in Teaching-Learning using Digital Platforms

It's worth to mention that the current pandemic had never impacted academia so badly and causing shutting doors of institutions for all of us. The unprecedented and unheard situations don't require just the best teaching methods, approaches, and practices but need concrete and tangible action in response to all that we have. The natural calamities and virus-effects challenging times can never be isolated and we learn to survive with these problems in the future. It's true that we have managed and conduct virtual classes using ICT on various virtual platforms to cater needs of the students to impart learning. But, there is still a large marginalized section of communities and students who are hit the most and tend to exacerbate the inequalities already existing in society.

(i) **Socio-economic Changes:** The socio-economic changes that we undergo today affect the marginalized students and families the most. Many students don't have access to home learning and parent supporting environment and are at most disadvantaged by closure of schools. Many parents have lost jobs; many parents face difficulties to make both ends meet, and many parents are struggling to pay their rent. Therefore, the pandemic affected every student on the earth, but not all affected equally. UNESCO Director-General Audrey Azoulay noted that "We now see that online distance learning cannot be the sole solution, as it tends to exacerbate already existing inequalities that are partly leveled in school settings. This will be of interest to this Commission whose task is rethinking the future of education, including appropriate articulation between distance and classroom learning".

(ii) **Access to Technology:** The sudden shift from F2F to online virtual

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classrooms makes all happy but there is a hidden side that blooms the efforts put in. Many students reside in remote areas and live in poverty. They don't have access to technology that needs electronic gadgets like mobile phones, laptops, the internet, digital skills, etc. The students become anxious, frustrated, and worried about missing the important classes pushing them far behind those students who live in urban areas with access to technology.

(iii) **Internet Connectivity:** with the given facts above, the people living in remote areas don't get uninterrupted electricity, internet connectivity, and no signals for mobile networks all contribute to students' damage to their course learning. In an interview with the New York Times, Gordon (2020) estimated that 30 to 40 percent of families lack a suitable device or Internet access.

(iv) **Content:** The current situation has compelled authorities to assign teachers to undertake remote and virtual classes at short notice. This made teachers perplexed and upset to attend to the content preparation to the level and course for the students. The teaching became cumbersome and monotonous without the activities arousing students' interest to partake. It created chaos and anxiety in students who couldn't comprehend the contents taught and makes them scared of the topics.

(v) **Pedagogy:** The virtual classroom lacks major activities on the topics prepared and taught based on major constructivist, collaborative, integrative, reflective, and inquiry-based learning. The students feel bore and show no interest to attend the virtual classes. The class seems to be teacher-centered without any productive work and learning collectively. The teacher acts not as a mentor who helps students achieve the learning goal in F2F classroom teaching. It lacks real-world illustrations given in the classroom. The virtual or online synchronous teaching misses the fundamental aspects of pedagogy; curriculum/ content of what is being taught, methodology, and techniques for socializing children in the repertoire of cognitive and affective skills required to attain 21st-century life skills.

(vi) **Learning Time**: The teacher finds difficult to make a balance among allocated time, instructional, engaged and academic time (Wong & Wong, 1998) because the students' lack of motivation in teacher instruction and learning, participation and involvement in a given task and time teachers can feel and prove that students have learned the content effectively. Persistent absenteeism during good times may even become worse now, with lessons being conducted remotely, more students are missing class- not logging on, not checking in, or not completing activities or assignments.

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(vii) **Paucity of Funds:** James Walker et al (2020) found that the researchers have undermined their confidence in applying for grants that are not focused on Covid-19 and are concerned that the extreme focus on the pandemic would mean less funding and attention for some of the other major challenges humanity faces. It doesn't pay heed to the major concerns the teachers and students face in undertaking remote and virtual classes on digital platforms. Secondly, the teachers and researchers get very little time to devote to research. The abrupt shift to online teaching and learning consume an increased amount of time being devoted to teaching, assessment and management, to ensure quality of education for the students. The survey concludes that the time required catering students' needs means less time given to research activities. Around 76% of teachers felt online teaching was a lot more time-consuming to prepare, while about 40 % found online evaluation also took up more time. It also underscores the inequalities, with junior teachers seeing a 5% more rise in time devoted to teaching and assessment than their senior teachers who have been able to devote time to research. This could impact on their career progression.

(viii) **Cumbersome Schedule:** Both IT staff and teachers have been stretched by a sudden change to online teaching making multiple changes to their work habits, uploading their teaching materials online, and get to digital skills to online lecturing. Teachers sometimes record many videos for use in one or two classes, and evaluating each student's assignments and uploading feedback. Many people work tirelessly, around the clock to provide training to teachers on how to use digital platforms for synchronous teaching and learning. Teachers have to prepare in-class activities, quizzes, assignments, group discussions, and update presentations to make more informative and interesting because a few learning experiences cannot be replicated digitally.

(ix) **Learners' Pre-existing Knowledge:** The last semester witnessed virtual classes undertaken remotely by teachers by arresting and challenging the imagination based on students existing subject knowledge, which would be unknown for the new students. Teachers and students would need time and special attention to tune to new topics. Teachers should adapt and be flexible in their approach in online teaching. It throws a great challenge for the teachers to evolve their plans, select content wisely to fulfill students' needs.

(x) **Poor Online Engagement:** The consistent engagement of students in virtual classes is very critical and results in an increase in dropout rates. The students usually develop social relationships and have peer-to-peer

interactions in schools. This is about learning to be a good human being, a citizen, and developing social skills. Teachers and parents should stay connected with the students by any means. These tough, terrible, and difficult situations develop socio-emotional skills and learn more about their own capabilities and strengths. Parents and family roles also become extremely crucial to guide and counsel their wards. Social media, TV, and SMS messages can be used to provide tips and advice to parents on how to better communicate, handle, and support their children graciously.

(xi) **Learning Outcomes not Achieved:** Many studies pointed out that online learning did not affect student learning outcomes significantly. Providing guidance online for learning for many students seems less successful than does use such means with individual learners. It commonly influences the way students interact, but not the total they learn. Even video or online quizzes, tests, and assignments do not appear to influence the total that students learn in online classes. The research does not support the use of some frequently recommended online learning practices.

(xii) **No Concrete Final Assessment and Evaluation:** The switching over to online posted many challenges to assess and evaluate students' subject learning. The institutions could not conduct final exams giving more weight to weekly assignments and less weight to mass final exams. But practical applications of knowledge learned, such as laboratory-based classes in science, have also been canceled and final marks calculated on the bases of current semester assignments and previous semester final marks. This action has reduced the negative impact of this pandemic on students to get back on a path of faster improvement in learning.

As education systems deal with this crisis, we should also think of how we can build up our strength, with an improved sense of responsibility and with compassion, adaptability, flexibility and sense of exigency of the need to shut the gap in opportunities and assuring that students across have the same chances for quality education.

Opportunities

We are still trying hard to emerge from lockdowns around the world and the toll the pandemic on the education system is taking is tragic. Clearly, a deadly virus is no way to tackle the educational emergencies, but global education standards have fallen sharply as teachers, students and parents have needed to travel and work less, attendance at workplaces has come to zero in all organizations and a fearful environment has emerged all around. Furthermore,

much money and other resources are being mobilized to rebuild the robust digital platforms and to facilitate students' learning, raising the question: can we return back better? Is a sustainable new education system that stops F2F teaching and the experiments in labs in schools possible? What would it look like ahead and how do we get back to our normal teaching and learning? The succeeding points will shed light to answer these questions by turning the current challenges of pandemic into golden opportunities. Classrooms don't teach students: Teachers do. We lack professional teachers. Here is what we should do!

The pandemic has had an indelible effect on the chance to train, upskill, and digitalized the talented learners at a time when they have trouble getting learning their subject knowledge. The final year students and internship holder are anxious and worried about their exams, project and assignment submission, and are investing in the development of their skills and competencies owing to fears of career prospects.

(i) **Self-Digitalization:** The COVID-19 pandemic has vitally affected countless facets of our lives, particularly the world of education and work. All sectors are grappled with the new-fangled and intricate reality that moved us to use digital tools, platforms, technology, enabled facilities to continue seamlessly to continue our learning. We had incredible talent, enormous potential, state of the art labs and infrastructure, the Covid-19 has augmented the benefits, productivity, and dexterity that digitization can fetch in these terrible and indecisive conditions. The teachers and students have to update, upskill, and learn digital skills to manipulate to these unwarranted changes in the way we all used to live and work pre-pandemic times.

(ii) **Bridge Gaps:** The pandemic impact on education has enforced to undertake teaching remotely on digital platforms and gave time to rethink and retool all that we possess and exercise in academia. Along with, the learning outcomes and end results of teacher's professional development have to adjust quickly to the new reality and utilize their skills at appropriate times and places by updating, upgrading, upskilling and reskilling. The teachers and students may take advantage of numerous online resources available, currently offered for free. This would enable and equip them all in their individual capacity and capability to develop their skills and competencies. This induces immense confidence and motivation making ready to grab opportunities in the future.

(iii) **Regain pre-COVID Normalcy at Work:** Sooner than later, we need to think, plan and execute a phased shift from virtual learning to restart F2F teaching and support the teachers, students, and support staff to