Tech Shock and the New (Digital) Normal: Blending and Mending Higher Learning Approaches

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Abstract

With the coming of the Pandemic technology came to have a never seen before status in the field of education. Higher education, being more aligned with research and innovation, is now increasingly seeing a great amount of (felt) leverage in technological advancement and adaptation for not just a better outreach and community interface but also for developing tech-based research models and interventions. However, as the concept of cultural lag (Ogburn, 1957) suggests, certain pedagogical contexts and communities also experienced difficulties emanating from these paradigm shifts, thereby underscoring the need for a wholesome integration of digital technology with education. With manmachine dichotomies challenged in the face of these new cyborgian cultures, it was not just the Luddite thinking (Snow, 1959) that received a tech shock as the new normal unfolded its demands. Amongst the teachers who were at the forefront in this new dilemma requiring a proactive resolution of the physical/online problematic, many faced a newly introduced gap in their cognition and performative prerequisites. Thus, reports of burnout, tech induced trauma, quitting academia (Forrester, 2023) alongside over-reliance on new age technologies, generative AI etc. surfaced around the world.

This paper is developed with theoretical base provided by studies in the STS (Science, Technology and Society) movement (Castells, 2005; Latour 1991; Merton, 1938) as well as the recent debates on the impact of digital convergence on our educational cultures and pedagogy. Further the concept of Future Shock (Toffler, 1970) has been extended to frame the strains and transitional challenges with regard to pedagogical adaptation and coping strategies which can be considered as intervening navigational approaches. The methodology involves narrative analysis within a constructivist paradigm supported by secondary source interpretations. The researchers have included narratives obtained from teachers of higher education belonging to different Indian states (with 30 in-depth interviews) as well as observational studies of the classroom discussions at a state university in north India. In the final analysis it brings out the necessity of achieving a creative blend of tech sensitive ways of shaping pedagogical dialogues for a sustainable future of learning.

Keywords— Tech Shock, Digital, New Normal, Cultural Lag, Cyborg, Higher Education, Blended Learning.

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I. Introduction

Humans are tools making animals. This thought has been with us since our school days as the textbooks explained the journey of evolution of man. However, the coming generations will also need to be simultaneously informed about the power of tools to make humans. No more the stories of Frankenstein's monsters remain shocking enough. They are the new toys for the digital natives' coming generations. Having joined hands with such new possible versions of ourselves, the adaptation shock has gone invisible. It comes out in conversations rather differently. In imagining pedagogy afresh and feeling burned out. Burnout is the talk of the town. People are discussing it on the internet with great zeal, especially after the pandemic. The idea of quitting jobs for ensuring one's wellbeing is trending with prompts like 'the quiet quitting', 'the great resignation' etc. It is evident that the pandemic had its share of revelations when it comes to integration of new technology with education. Before it became a survival task, the community of teachers (with few exceptions) had not thought of it in this light. This paper is an inquiry into this revelation and its aftershocks.

II. The Indian Scenario: Social Transformation and Learning Blends

This study began with certain questions in the light of the changing social matrix of learning and the embedding of learners in a pedagogical context primarily in contradiction with the new coordinates. Speaking regionally, the idea of learning is often seen grounded in the *guru-shishya* (teacher-disciple) mode of interaction as framed within the *gurukul* cultures prevalent in India. It privileges a strictly face to face teacher-taught relationship shaped alongside a spiritual framing of the same. This continued well into the spaces of learning which emerged with modernity and democratic recasting of the Indian educational system in the post-independence period. The whole articulation of the Indian identity as a counter to colonialism required a certain linkage with our traditions and traits which emphasized values of civilizational unity and transcendental nature of Indian modernity. The positioning of the secular too has been drawn in accordance with the spiritual and relationship with the divine. From Kabir to Ram Mohan Roy or Tagore to Gandhi, one can witness this insight. This has been the characteristic feature of the Indian Renaissance which challenged the empire with its scientific and inclusive imagination of knowledge based on civilizational strengths and community-based articulation of plural ways of thinking, knowing and

belonging. Thus, the existence of a cultural-self precedes the rational-self of the seeker of wisdom in India.

The triumph of the technological, bereft of its social rootedness, is a recent happening for the Indian educational sphere. In his seminal book Modernization of Indian Tradition, Yogendra Singh opines that Indian social systems adapted well with modern ways of life, be it the familial, kinship forms or designs of living. Thus, forces of industrialism, urbanization, scientific education and democratic governance reflected a deep connection with the existing patterns of social life in their working in modern India (Singh, 1986). Jawaharlal Nehru, the first prime minister, also called industries as the 'temples of modern India' and his views on inculcating scientific temper through governance and education are also well known. Science and technology thus played an important role in the journey of the nation-state in India. People's Science Movements (Mathew and Sooryamurthy, 1994) and a search for sustainable alternatives (Nandy, 1988) is also evident of it. This continuity got carried forward even with globalization which also came as an extension of the logic of modernity itself (Giddens, 1991). Although with ICT as the driver of globalization, one could witness a clear divide in terms of access and opportunity which came to be called the digital divide. It also resonated hugely with a sharpened divide between cities and villages in which the urban became a symbol of 'smart' and fast paced life. With the internet acquiring larger reach and the governance push for Digital India, the pedagogical imagination and contours have acquired a tectonic shift amongst the masses. Social media platforms have found great resonance with the Indian public, and this has led to an increased confidence on part of many, looking forward to the start-up trend. While Gen Z is advancing ahead with its tech-fed dreams, it is imperative for our pedagogical systems to keep them grounded in their social reality and resolve the dissonance between a culturally aware, scientific approach and a tech-centered learning mindset. Here comes the gap that this study explores. The following questions guided the study.

- 1. How are higher education teachers adapting with the challenge of catering to Gen Z's learning?
- 2. Is digital the new prism for the classroom? How is blended learning visualized?
- 3. How are educators looking at the future of learning and needs of learners? Are they feeling in sync (or empowered in some way) with the new (digital) normal or a feeling of inadequacy is settling in?

4. How does the cultural context affect tech-based learning and teaching? Is there a lag?

III. Theoretical framing and background:

The background theoretical context is drawn upon perspectives from sociology of science and foundational thinking in the STS movement (Latour, 1991). At the same time inferences are drawn from Alvin Toffler's popular work titled 'Future Shock'. This, alongside the idea of 'cultural lag' is used to argue that in the contemporary scenario there exists a relatively less noted tech-shock that is responsible for responses that need to be addressed in a wholesome manner. The tech shock that this paper talks about is a malaise that requires a much deeper response than emphasizing upon tech-literacy or better tech-training alone. The literature review explaining the formulation of research questions basically starts with sociological understanding of technology and science itself.

The idea of science has been the primary influence in the shaping of sociological studies of technology or for that matter, its shaping within a social context. The utilitarian aspect is highlighted much more as one conceptualizes the instrumental definitions of it. However, that technology redefines our worldview as a mode of doing is as old a critical theoretical linkage as the Marxian tract against its capitalistic frame. Thus, when one looks at the critique of onedimensional theorization of technological rationality (Marcuse, 1964) as encountered in the critical theory perspectives coming from Frankfurt, one must remember that alienation can be manifested both as a fallout of mal adaptation as well as over adaptation with technological determinism. This dimension of psychological refuge, disguised as utilitarian comfort or ease that technology provides, need not be undermined when a pedagogical understanding must evolve. That our pedagogies are built upon constructivist approaches (Vygotsky, 1978) is well understood. But the interface of advanced internet technologies with thinking and learning tasks is less explored from a critical pedagogical culture standpoint. Although there have been questions raised regarding the impact of digital mediation upon educational cultures, yet a functionalist paradigm dominates such articulations emphasizing the communicative competence and speed of dissemination inherent in the new technologies. Speed is the new metaphor of productivity as well as success in the postindustrial world (Gates, 1999). One is reminded of Marshall McLuhan's medium is the message thesis here (McLuhan, 1964).

Max Weber's essay on 'science as a vocation' presents us with the problem of meaning inherent in scientific or for that matter, any human endeavor. For Weber, it is the idea of calling that ultimately faces our being as social actors in the processes of rationalization and the quest to know truth (Weber, 1970). Methodologically speaking, science reflects a difficult encounter with questions of purposive rationality, sticking primarily to its procedural epistemologies which are rooted in empiricism, referentiality, reductionism and causality. In the ideas of Thomas Kuhn, one comes across the revolutionary conceptualization of science (Kuhn, 1996). This takes us to the root of the debate on ethics and meaning in science. In the writings of Karl Popper, namely 'Open Society and its Enemies', one can see an envisioning of the meeting of coordinated social change with science when he refers to the piecemeal engineering and in-built fallacy of scientific notions (Popper, 1945). With due regard to Weber, this perspective can also be seen as contributing towards the routinization of the charismatic transition in society brought forward with scientific knowledge. The charisma which one observes at the scientific plane has now become operationalized in technological terms, fusing the meanings of science, discovery, technology and innovation.

Technology, in the present, is thus also positioned for falling into wrongful or cognitively elusive interpretative webs. Its meanings can be construed in an inherently deceptive manner. One such example is the meaning associated in terms of providing comfort. This has a huge resonance in popular culture. In a movie scene depicting an engineering college classroom, the definition of machine is summarized by a supposedly super-intelligent student as something that saves human effort and energy. Ironically, the movie is titled *'The Three Idiots'* and is based on a book whose author is reflecting on his student days at a reputed institution for Engineers using fiction. Thus, technological interventions easily acquire popular perceptions of being effective solutions to human problems. The human side of technological change is usually cast in a dichotomous manner with benefits and side effects as the two linear and opposite manifestations of the same. The complex, reflexive and nuanced mode of adaptation is thus simplified into equations of facilitation/ impediment. In the present context, scholars have pointed out various cultural and social justice-oriented perspectives for understanding the complexities of digital merging into the pedagogical in India, especially with regard to the responses and acquisition of skills of learners (Kumar & Shastri, 2023; Dhawan, 2021). Similar studies highlight the digital challenges with regard to

education, opportunities and gaps, as well as the imbalances and adaptation in a post-pandemic world (Czerniewicz et al., 2023; Bedenlier, Bond & Zawacki-Richter, 2023).

In studies on social contexts of science and technology, one witnesses different strands giving rise to a range of possibilities and standpoints to understand this terrain. From a Mertonian standpoint, one learns how conflict and multiple sites of knowledge production enrich the scientific domain of work. He acknowledges communism (collective ownership of knowledge and sharing), disinterestedness (detachment alongside involvement), originality (ethical manifestation), an emphasis on universalism and organized skepticism as significant normative pillars of the scientific community (Merton, 1942). Scientific paradigm of knowledge and learning advancement does not assert finality or completeness in any way. Scientific understanding humbles itself with a conviction about its incompleteness. Weber has also greatly emphasized this inherently incomplete version of scientific interpretations of reality (Weber, 1970). Thus, we are approaching the standpoint of an existential (and experiential) gap or lag between scientifically derived technological claims to provide sustainable human solutions, especially in the pedagogical domain. If the speed of change outpaces the human adaptive faculties, it is bound to result in a certain kind of shock and trauma. That it does so is also quite evident in the digital world.

IV. Approaches to understand cultural lag and collective shocks:

The concept of cultural lag, firstly put forward as an explanation for differential rates of change in different aspects of culture and the resulting strain was first mentioned by Ogburn in 1922 and refined in 1957 (Ogburn, 1957).

Further, Kalervo Oberg opines that a 'Culture Shock', a term he borrows from Cora Dubois who used it in 1951, can result from loss of familiarity and orientation to social situations. Extending the idea of culture shock further, Peter S. Adler introduces it as a transitional experience which shows adaptation and alienation simultaneously. It is "primarily a set of emotional reactions to the loss of perceptual reinforcements from one's own culture, to new cultural stimuli which have little or no meaning, and to the misunderstanding of new and diverse experiences" (Adler, 1975). However, Adler believes that it may lead to cultural learning and personal growth even though it begins with feelings of helplessness, crisis and panic. About the technological aspect and cultural ways of responding to it, he writes:

"One needs imagination to confront a revolution. For revolution does not move in straight lines alone. It jerks, twists and backtracks. It arrives in the form of quantum jumps and dialectical reversals. Only by accepting the premise that we are racing toward a wholly new stage of eco-technological development—the super-industrial stage—can we make sense of our era. Only by accepting the revolutionary premise can we free our imaginations to grapple with the future."

Some researchers had predicted the outcomes of the information age many years ago and had warned about complacency in technological choices. We need far more sophisticated criteria for choosing among technologies, there is a need for policy criteria not only to stave off avoidable disasters, but to help us discover tomorrow's opportunities (Toffler, 1970).

The technological choices are also the pedagogical ones. In the academy, once it was usual to encounter Luddite thinking and what C.P. Snow (1959) highlighted as the two cultures' argument. Though we are increasingly getting used to digital humanities, it needs to be understood whether the recasting of humanistic disciplines in digital terms is a seamless process. Further, what are the fault lines in imagining a transition in our pedagogical frameworks, when the technological (or the digital) is blended with an inter-subjective, dialogical mode of classroom interaction?

The idea of technological shock comes forward as an answer to the research questions posed, following the review of literature. Tech Shock, as derived here from the term culture shock, basically means an overwhelmed state of response, having both psychological and social fallouts, on encountering certain new techno-centric processes, ideas and cultural practices in one's own or newly joined cultural setting which challenge the meanings and core perceptions constituting one's lifeworld and its ethical foundations. Thus, the term has moral connotations as also encountered in the narrative analysis presented here.

V. Methodological Approach and Design:

The methodological standpoint for this study is interpretivist and derives from ethnographic observations carried out over a span of almost two years (one during and one year after the pandemic). The interpretative approach aligns with constructivism as the online reality of education is observed, investigated and analyzed keeping in mind the cultural context of learners,

primarily the teachers and students of higher education. The researchers conducted in-depth interviews of 30 teachers of different disciplines ranging from humanities to pure sciences, law, engineering and management (out of which 15 conducted telephonically and 15 in a face-to-face manner) and also observation through participation in online, classroom learning during faculty development courses in the higher education set up in north India. Another observational setting was the online, classroom-based learning of students belonging to the law and social science domain in a women's university in Haryana, studied with ethnographic modes of interpretation.

Figure 1



Teacher Interviewed Across Disciplines

The constructivist paradigm places a lot of emphasis on meaning making and empathetic understanding. Thus, reflexivity (Woolgar, 1988) acquires a central role in the process of data collection and interpretation. The observant participation was carried out with a consciousness of the cultural inter-subjectivity and weaving of the ethnographic 'self' within the meaning-making processes impacting the participants. A researcher as well as methodological triangulation also came to provide a relational frame of reference to the study, bringing the social and the psychological together in forming a bifocal lens.

VI. Floating amidst fears: narratives of the new Tech Shock:

The narratives provide a window to analyze culturally framed pedagogical responses to the idea of digital transformation in teaching/ learning approaches. The trajectory of expressing painful unfamiliarity with the changed context often takes recourse to affective mode as well. The study

makes the following thematic assertions regarding the new (digital) normal and its disruptive shadow.

1. Ambivalence regarding the purpose:

The first response that one encounters is rooted in inability to make oneself clearly understand the meaning and larger purpose behind the new configuration. Most of the teachers, especially from humanities and social sciences, felt a sense of loss when it came to relate with new modes of tech-based teaching. The following narrative captures it well.

I really can't justify all this new online experimentation. It's too much, you understand? What is the idea, I mean? It's fine that we can now have an online class and the feeling of not having taken class may not be there. But then what do we achieve in those classes? The students just can't relate with it. I mean, I can't relate, what about the student? It's all jabardasti ka (forcibly done) thing, you know what I mean? One feels so inadequate, so incomplete as a teacher. I just don't get that feeling I'm used to. This whole blending thing is so artificial. One starts doubting the very idea. So unnerving, it is.

The ambivalence is evident in the use of the term experimentation. Many feel that in the long run only the conventional ways will return with people giving up hope on such an artificial mixing up of the old and the new. The new technologies are seen as some kind of poor (experimental) replacement of the (erstwhile) face to face learning world. They see themselves positioned quite disadvantageously in achieving a sense of pedagogic satisfaction in the online world.

2. Techno-empowerment as an anxious race:

It's a race. And I seem to have no energy. I'm trying though...there's no option of opting out. They say slow and steady wins the race. In digital India this has been inverted. Steady but slow is a recipe for failure. We need to run faster or risk getting run over. The world of the internet is rewarding for those who can master it. There's so much possibility to make a huge amount of money. But there's a chance of not making it if you are not super clever.

The narrative above captures the speed-based imagination of the new age technologies. This feeling of catching up with the times has been majorly present in many other responses. The world of digital learning has left the learners in an ever-restless state of running after it consistently. The idea of race also points to the perceived competition and fear of losing one's place if not able to speed oneself up. This anxiety has its consequences.

3. If Gen Z is so different from us, can we really make sense to them?

The teachers believe that Gen Z is not in sync with real life and that the idea of virtual reality has subverted the pedagogical journey of the digital natives. This has caused a block for the teachers needing resolve. When confronted with new technologies, they believe that the gap is so much because of the differential perceptions and abilities to navigate these new virtual ways of being. The narrative below speaks volumes.

It comes so naturally to some of them who have had access to it. The others are like us, they are struggling. But then, once there, the teens find it easy. We don't. We are more accustomed to life outside of it. For us it's like the means to an end. For them, it's like a dream world. Normal life doesn't have that kind of appeal anymore. Why would they look up to us? They now just wish to fulfill the formalities. The world of gaming is their world. The old books that I prescribe have a language these kids can't relate to. Their language is so full of slang and Zombie kind of words!

4. The pedagogical is personal, not anymore:

The mediation of pedagogy with digital has rendered it depersonalized. It is no longer an ethical dilemma to leave a classroom or learning platform as per one's convenience. The explanation is handy with network issues. And it is not that simple either. For it extends way beyond that. Technology has made it possible to conveniently excuse oneself from so many difficult situations that are profoundly pedagogical and embedded i.e. necessary for realizing the dialogical spontaneity of a reflexive pedagogy. It has consequences for both the teacher and student. The pedagogical flow is now subject to a click of mouse.

Well, if something goes wrong with the network, how is one answerable? But then, is it really so? Many times, it's just an excuse. We are now free to learn as we please. What can the students do? They start enjoying it too. Convenience is now the name of the game. But it must look formal. The format is formal. The cost of this convenience is rather high. One also feels that it's invasive when the academic tasks flow into the personal time zone. There's so much to be done to just complete the format...preparing presentations and reading material, sending emails to students, completing the online documentation tasks and so on. It's toxic for health and mental peace. One can't even trust the online scenario. Anyone one misuse what you say...or whatever some student says.

On the other hand, students share their problems of not having the requisite attention of the teacher. The features of muting and removing someone from an online meeting have placed enormous power in the hands of someone who is having these controls. The teachers are way too formal, the students feel. The classroom has become bureaucratic and impersonal, they say.

The teachers often don't feel concerned at all. We have a feeling of being taken for granted. We are asked to keep ourselves muted. If we write in the message box, it can be easily ignored. The teachers just send an email and assign tasks. To have it changed if it's not suitable has become so difficult. For them, the responsibility ends once it's communicated. For us, the problems begin. Even if they reply to our emails, it's usually in such a way that proves their point. You can't go on arguing digitally or else you may be called a troll. One feels helpless.

5. The bodv eclipsed with the fatigue: stands tech new I have this continuous feeling of heaviness in the head. I know it's because of this new digital scenario. The screen now repels me. I don't feel like starting the meet. But then, I have to. I'm losing my sleep because of all this. Feels like as if someone is dividing me in two halves. It is one thing to use a mobile phone for communication and totally another to see it turning into an institution of sorts. If something goes wrong with it. I start feeling so insecure. I'm always looking for its charger and panic when it's not visible. Should I see a physician or psychiatrist? The fatigue doesn't seem to leave. I feel vacant at times. Thank God for the camera controls. I usually switch it off. It's so embarrassing to appear distraught.

This is a very common response. Tech fatigue is making many teachers and students feel helpless. Thus, learned helplessness (Seligman, 1972) is a usual symptom of Tech Shock. In absence of an institutional mechanism to address it, they are reeling under pressure and getting stuck with notions of burnout. No wonder, the stories of quietly quitting academia started surfacing with the rise of the new (digital) normal.

6. The new (digital) normal as a pedagogical checkmate:

It's checkmate! We can accept it and live with it or just leave. There's no third way to deal with it. It's here to stay. The only thing that we are left with is the nostalgia of the old days.

With no help in sight, many have resigned to the existential bind that has engulfed them with the new Tech Shock. They feel nostalgic about a lost future they had envisioned in the pedagogical world. This phenomenon is more marked in teachers of arts, humanities and social sciences. There was a divergence in narratives of teachers belonging to engineering, information technology and computer science. They seemed relatively less challenged. However, the strains that have emerged are similar when it comes to the idea of personal space and bodily well-being. Only the adaptation is somewhat smoother, especially with regard to ethical questions related to face-to-face pedagogical advantages.

VII. Concluding remarks:

The Tech Shock is real. It is also here to stay. We can acknowledge it or let it become a silent epidemic for our pedagogical systems' creativity and life-long learning aspirations. It is not just the teacher who needs help. All sections of society who are feeling this shock need to cross this

pedagogical bridge. The bridge is yet to be visualized, especially in the less developed regions of the world. We talk of decolonization but have ended up colonizing ourselves with no holds barred digital aspirations for a magical social transformation. We are leveraging our policies based on this mammoth digital dream. But our pedagogies are slowly succumbing to the shocks inherent in this push. We need to listen. We need to imagine afresh. From curriculum to classroom, we need shock absorbers and messengers of healing.

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