Human-Technology Relations in the Classroom: Postphenomenology-Inspired Field Notes From a COVID-Impacted Humanities Classroom in the Global South

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Abstract
Integrative humanities aim to create cultural structures to negotiate with unforeseen events. Classroom experience during the pandemic-post-pandemic periods is one such crisis-ridden, generation-defining event. This paper — a crossover between a research article and field-notes, seeks to apprehend and articulate the nebulous experience of classroom instruction immediately after the COVID-19 pandemic. It aims to make sense of the researcher's dual-mode classroom, focusing on human-technology relations, informed by the postphenomenology framework. Technology integration in classroom, it is assumed, forms an effective heuristic to understand the whole spectrum of cognitive-affective responses in a classroom. The narrow focus of the field notes, a COVID-impacted classroom in a specific geographical location and socio-cultural context, with a learner-group of a particular demographic profile, where a certain kind/degree of technology-integration obtained, could help unpack the classroom dynamics across teaching-learning contexts. This hypothesis is based on two crucial factors: the academic "new normal" ushered in by the pandemic has made visible the often taken-for-granted procedures in the "normal" classroom, and secondly, specific classroom anecdotes, and theory-informed/theory-informing reflections on them, are perhaps more helpful in formulating valid generalizations, and lead to the production of socially usable knowledge, than abstract theorizing.

Keywords: Technology-Human Relations, Postphenomenology, Dual-Mode, Instruction, Pandemic-Impacted Global-South Classroom

Introduction

In a time-honored tradition in India, a Hindu child's educational journey starts with a ritual called *vidyarambh* or *akshararamb*. In this ritual, the child, seated on the father's/guru's lap, traces the first few letters of the alphabet on the pile of rice heaped on a banana leaf, amidst the chant of *mantras*. The ritual is performed on the tenth day of *Vijayadashami*, an auspicious period of ten days, and the ceremony is closely associated with *Ayudha Puja* or *Shastra Puja* (Worship of instruments of all kinds).

The ritual, one of the 16 *samskaras* (sacred sanctifying ceremonies) (Oldenberg, 1892), is a lay-philosophical reminder that the human world is a relational field, formed by the connection between the human and its `other` (Heidegger, 1977), including tools. The ritual is comparable to the mirror stage in post-Freudian psychoanalysis, the process of self-embodiment (Lacan, 1977). It goes a long way towards intuiting the relational nature of human existence and contributes to self-making.

The ritual resonates with the ageless wisdom about what modern theories term as technology-human relation: the hand, the synecdoche for the body, crosses the mysterious Rubicon (Lawrence, 1936) to reach out to the world, both at the literal and metaphorical levels. Tracing the letters of the alphabet is a metaphorical reaching out, signalling the further consolidation of access to the mediated world. Accessing the world through the spoken and written language is facilitated by technology (Heidegger, 1977; Ihde, 1990; Verbeek, 2008). For a speech community, language, the primordial machine that mediates the extra-linguistic (pragmatic) world, works in tandem with the myriad `language games` in the Wittgensteinian sense of the phrase (Wittgenstein, 1958), all the while remaining invisible (Dreyfus, 1974; Ihde, 1990; Rosenberger & Verbeek, 2015, p. 389). The act of tracing the alphabets on rice, rice being the thing the Indian child is intimately familiar with, the little learner often being puzzled by its solid/liquid thingness, and the subsequent use of a writing tools like slate and slate pencil, accompanied by the sense of wonderment at being able to "fix" the ephemeral/fluid speech sounds, is the rite of passage from a fantasy-filled world to a pragmatic one, where the written word and figures play a crucial role in perception/action. The act marks the beginning of the process that results in the child becoming a literate subject, one capable of a transformed relation with the world through technology (Ihde, 1990). Further, the child's world of objects acquires another layer or sediment (Merleau-Ponty, 1945, p. 13), besides the one formed during the days of the child's orality. As the young learner gets familiar with the complexity of the new systems, literacy and numeracy, these systems become increasingly transparent. The technologies that offer the child its lifeworld (Husserl, 1970) will soon fade out, appearing only in moments of disruption.

The above account of the ritual is a kind of *fil rouge* to establish the link between the modern classroom scenario, with increasingly intense technology integration, and ancient and modern philosophical insights, from the East and the West. A classroom in crisis lays bare the cognitive-affective processes defining the classroom, much like *vidyarambh* or *akshararamb* and other rituals.

Technology-Human Relations As Effective Heuristic

The COVID-19 pandemic posed myriad challenges, some of which were domain-specific. In the context of education, preventing the triple loss: life, livelihood, and learning was the main challenge that the pandemic threw up. Technology integration was key to handling learning

the last of these challenges. Human-technology relations, under the spotlight, suggest an effective heuristic to unpack the classroom dynamics. Gauging human-technology relations in the dual-mode classroom, through which this article seeks to understand the key features of life in the lang-lit classroom, is predicated upon a discussion of human-technology relations in the face-to-face mode, in contradistinction to online, and hybrid modes.

In the modern lang-lit classroom, technology mediation is a secondary-level mediation, since the technology-mediated target culture is a product of the first-level mediation of the symbolic-semiotic system. The lang-lit classroom across the world is witnessing increased use of technology, with technology driven processes shaping learning experiences. The ultimate pedagogic fantasy of educational technologies is the quantum-leap in alterity relations, a key part of technology integration — the teaching machine flawlessly simulating the human teacher, and a learning process that is truly dialogical-didactic (Freire, 1970, p. 1; Vygotsky, 1978). From language laboratories to teaching robots, the classroom has been witnessing a variety and degrees of alterity relations.

Issues in Technology-Human Relations: **Literature Review**

Embodiment in the technology-human relation is a concept under intense scrutiny, with the intellectual community's responses ranging from shades of luddism (Carr, 2010; Dreyfus, 1974; Haidt, 2024; Newport, 2019; Putnam, 1988; Weizenbaum, 1976), to varieties of techno-utopianism (Chen, 2012; Clark, 1983, 1994, 2007; Dede, 2019; Fullen et al., 2017; Kozma, 1991; Prensky, 2001; Turkle, 1984). Are machines the externalization of the human mind or are they the mind's poor cousins? (Dreyfus, 1974, 2006; Turing, 1936). Does educational technology involve the use of inert machines that do not actually contribute to learning? (Cuban, 1986; Kohn, 2016; Selwyn, 2011) Does technology integration radically alter classroom instruction/ transaction? (Davidson, 2017; Swan, 2003) Is machine-mediated learning fundamentally different from the teacher-led, face-to-face classroom interaction? (Reich, 2020; Selwyn, 2011) Are learners being forced to carry the curricular burden: time-management, cognitive-load distribution, and discipline? (Kapp, 2012; Miller, 2016; Visser et al., 2012) Is learning in a tech-heavy environment haunted by loneliness and fatigue? (Junco, et al., 2011; Meyer, 2014; Tsinakos, 2014) Is machine-learning turning students into social misfits? (Turkle, 1984; Twenge, 2017) Does teacher rapport with children constitute the missing X-factors in machine-led learning? (Anderson et al., 2001) Is unpredictability the crucial missing element in automated learning processes? (Bain, 2020) Is the digitally augmented learning experience totally reductive? Or is it more effective than the imagination-led traditional learning? (Shapiro, 2020) Does tech-variety spice up the learning experience? (Bonk & Zhang, 2006) Educational technology has been haunted by these and many such queries.

Technology-Human Relations in Online Learning

Some of the concerns pertaining to technology-human relations are specific to the online mode of instruction. In this case too, Ihde's three aspects of the technological mediation process —embodiment relation, hermeneutic relation, and alterity relation, obtain, but they are significantly different from technology-induced learner-experience in face-to-face contexts.

Apart from technology challenges (Bates, 2019; Garrison & Anderson, 2003, 2016; Paloff & Pratt, 2001), social barriers (Anderson et al., 2001; Garrison & Anderson, 2003), motivation

and time management etc., (Bransford et al., 1999; Brown, 2000; Khoo & Bonk, 2022), digital equity (Lee, 2024; Reisdorf & Rhinesmith, 2020) technology embodiment in online learning is fraught with certain mode-specific issues. For the online learner, the field of vision is totally mediated by technology (Conklin & Dikkers, 2021). In this instance, technology is far from transparent, with the stakeholders being acutely aware that they are only virtually present, and the interaction is of a poorer quality, without the rich verbal and nonverbal clues (Daft & Lengel, 1986) that a face-to-face classroom abounds in. These are major issues even in the best-case online learning scenario.

The hermeneutic relation in online instruction, which in the lang-lit classroom is the reader's relation to the spoken and written text, is marked by technology-assisted interpretive routines: teacher-talk, peer-interaction, and self-directed processes involving the use of video equipment and online platforms, virtual chatroom provision, downloadable e-texts, audio-visual materials, etc. Here equipment plays a limited role, being confined to the shaping of the assistive processes, leaving the meaning-making and meaning-transfer processes to the primitive form of technology-human relation — the body in contact with the material world (Eagleton, 2016), with consciousness and the will to communicate (Lévinas, 1969) being the "ghost in the machine" (Ryle, 1949).

With online learning, however, there are several other hermeneutic relation issues. Academic integrity, or e-honesty, and valid assessment dominate the debates on hermeneutic relation in the human and technology online tango (Khan & Subramanian, 2022; King & Case, 2014; Lanier, 2006; Watson & Sottile, 2010). For many scholars, academic integrity is a serious matter of concern in online learning contexts (Dietz-Uhler, 2011; Hancock & Thom-Santelli, 2004) Solutions to the integrity issues are often grouped under three categories: *trust*, *verification* and *observation* (Tobin, 2018). These proposed solutions are symptomatic of the extent of the problem.

Alterity relations in online instruction are shaped by the constant desire for "authenticity in automated work" (Jago et al., 2022). The human teacher must be visibly present for the students to get a sense of the classroom. The teacher-bots, RUBI for instance, are programmed to squirm and giggle (Robot News, 2007) to give a semblance of the human teacher-presence, highlighting the vital fact that teacher-presence is an indispensable part of the learning experience.

Technology-Human Relations in the Hybrid/Dual Mode Classroom

The hybrid/dual mode (Bruggeman et al., 2021; Doering, 2006; Garrison & Kanuka, 2004; J. Watson & Murin, 2014) classroom, the new arrival on the global academic scene (Hrastinski, 2019), has thrown up a new set of problems. Sophisticated technology requirement, the necessity to handhold teachers through new technologies (Anca, 2013; Biletska et al., 2021), varied access to new and sophisticated technologies (Campaine, 2001), excessive screen-time leading to health issues among learners (Neza & Viner, 2021), unequal content access (Rhéaume, 2020), student-support ecology issues, decreased social interaction and the resulting loneliness, limited collaborative learning opportunities, distractions, academic integrity issues, weakened student-teacher relationship (Rogers, 2000) are just a few of these problems. In India, the hybrid mode, a visitor (*atithi* in sanskrit) during the COVID-19 times, is set to become a permanent member of the family, as envisaged in the *National Educational Policy* (Ministry of Human Resource Development, 2020).

Human-Technology Relations: Fieldnotes From a Hybrid Classroom

What follows is intended to be research-aided fieldnotes, gleaned from a hybrid/dual-mode classroom. In presenting the ideas and observations as fieldnotes, I acknowledge the fact that the data is limited, and enjoys only provisional authenticity, both being the offshoot of pandemic-induced emotions/affects, which interfered with the learner-group's behaviour. Limited though the data is, an earnest attempt at comprehensive analysis has been made to bring out the embodiment, hermeneutic and alterity relations in the hybrid/dual mode classroom. The impressions from a solitary classroom in a humanities university in the central part of India (The English and Foreign Languages University, located in Hyderabad [Hereafter, EFLU]), a class consisting of a small group of learners, it is hoped, are significant in the context of technology integration in the classroom. This is a theory-induced hope, derived from postphenomenology's affinity with neo-pragmatism (Rosenberger & Verbeek, 2015), particularly the chosen framework's endorsement of neo-pragmatism's key contention: theory and practice are just two distinct moments in the meaning-making process. (Fish, 1989; Rorty, 1998). Instead of a theory appliqué (Deleuze & Guattari, 1987), or a postphenomenological study of my dual-mode classroom, I intend to do a `theory-induced and theory-informing` study, aiming to make certain valid extrapolations, with a view to contributing to the production of socially useful knowledge.

Fieldnotes: Ethnographic Profile of the Hybrid Classroom

EFLU opened for phased, face-to-face instruction, with the COVID-safety protocols firmly in place. The use of a virtual learning platforms was one of the key features of the dual-mode classroom. Well-defined, closely mapped programme and course Learning Outcomes (LOs), reading lists, and evaluation schemes were made readily available to students, and these documents familiarized students with the aims, and course-expectations for different course offerings.

A sketchy ethnographic profile of the class (The August to December semester of the academic year two thousand twenty - twenty-one) forms a necessary preamble to the fieldnotes. The students who enrolled for the course *"Shakespeare in the New Humanities"* were from different States of India (Kerala, West Bengal, Assam, Nagaland, Maharashtra, and Rajasthan), and they belonged to different social strata. A majority was from the middle-income group, while some were from the poorer sections of the society. Their technology and Internet access, too, was varied and uneven. Some faced a variety of infrastructural challenges associated with non-urban sites: unstable power supply, poor rail and road connectivity, makeshift houses, poor sanitary conditions, inadequate water supply, limited personal space within the house, to name just a few. Some of these issues were temporary, caused by the inclement weather and local social and political dynamics and other phenomena, while others were endemic issues, like in most parts of the Global South (Asian Development Bank, 2017).

Factoring in the ethnographic specificity is important to any study on COVID 19 impact on any domain, in view of the uneven impact of the pandemic on people in diverse regions and sub-regions of the world. Comparisons of and generalizations across different regions, nation states, classes and underclasses, and demographics, are still work in progress (The Economist, 2020; World Bank Group, 2021). It is therefore methodologically sound to limit oneself to describing situation/s that one was a part of, which, in this instance, is the lang-lit classroom.

Another reason for the narrow focus is that the "We", (the educational stakeholder groups) is a multistable category, with the groups often throwing up myriad, fleeting kaleidoscopic formations. The academic products and processes emerging out of the pandemic years appear in countless formations, some of which are temporary, while the others are long-term. Commodification of online and asynchronous instruction (Williamson & Hogan, 2020), educational interventions by the non-initiates through social, and new media, which is a surprising turn of the public sphere screw (Habermas, 1989), numerous kinds of public-private partnerships, collaboration among traditional institutions like the family and local community, peer-learning programmes, private citizen contribution, civil society initiatives …the list is only growing.

Fieldnotes: Learner Attitude

Turning to learner attitudes and classroom behaviour, the pandemic-induced trauma across demographics and geographical areas troubles anyone attempting to describe issues like absenteeism, lack of discipline in the classroom, poor participation and deadline compliance, and academic integrity. Education during the pandemic is a complex phenomenon, with strong emotions in the mix, and research ought to be shaped by empathic understanding. These notes therefore confine themselves to describing/explaining the three features of human-technology relations, assuming that the target learner group had got used to the "new normal", to use Mohammed El-Erian's term (El-Erian, 2010) in the form of classroom routines, and pedagogic interactions and transactions. The evidence in support of the claims in this paper is anecdotal as the traditional data-collection processes were out of the reach of the study, due to the high stress-levels of the potential respondents.

Fieldnotes: Embodiment Relations

The embodiment relation in my dual/hybrid mode classroom, the first of the three relations discussed above, with one group of learners physically present, maintaining "social distancing", and the other being virtually present, was marked by a high degree opaqueness, due to the limited view of the interaction-transaction that the virtual learning platform offered.

Extracts from the Shakespeare texts, curated film/video adaptations of the plays, selected based on the hypothesis — the centrality of the concept of "species being" (Eagleton, 2002, 2016; Marx, 1959), were the course materials. Text selection and presentation were the two pedagogic moves aimed at foregrounding/projecting a theoretical-narrative ensemble of ideas. The "species-being identity" argument was presented as the frame of reference to understand and appreciate the contemporary relevance of Shakespeare's plays. Unfortunately, however, the PPTs, videos, and texts, shared before the class as part of pre-class preparation, had not been studied by the group, with the group under severe pandemic-induced stress. Elizabeth Outka, (Outka, 2019) discusses this at some length in the context of the Spanish flu. This lack of preparedness led to the glitches in the presentations in the offline class assuming proportions of total disruption for the online group. "Your slides are not visible!" or "The PPTs are not in sync with the point you are making!" were some of the constant complaints. The habitual move towards the blackboard, away from the laptop, was welcomed by screamed objections, "You aren't audible!".

Learner-technology relations in my class-space were defined by the following:

- Extreme focus on the content to the exclusion of teacher presence, non-academic peer interactions, etc.
- Content worth 90-120 minutes of discussion compressed into 60 minutes, with fatigue resulting from the compression
- Emotions and affects resulting from remoteness from the Campus
- Non-availability of a space (at home) totally devoted to academic interactions and transactions for the online group
- The temptation to leave the classroom unnoticed (Martin & Borup, 2022; Svongoro, 2022)
- The newness of the technology, combined with the traditional classroom reticence of Indian learners, resulting in poor interactivity in the class, which was evident from the silence in the classroom, and the empty chat-boxes

Fieldnotes: Learner-Group Experience

The experiences of the two learner-groups were marked by many distinctions as well as differences. With the offline group, the remoteness from the traditional classroom was caused by the mandatory social distancing. With the online learner-group, this remoteness was caused by the technology-assisted virtuality of interaction. Both the groups experienced fatigue, caused by the new division of the university day, and considerably reduced peer-learning opportunities. For the online learners, the often-invisible teacher, the absence of small talk, curtailed class duration, and information overload, added another layer to the fatigue. The non-availability of a purely academic space was another dimension of the tech-mediated learning experience. The login-and-disappear routine was also unique to the online group.

My learners were uncertain about their academic goals and aspirations (Stringer & Keys, 2021), nursing an ambivalent attitude to learning (Bekele, 2010). To the online group, the classroom was an unfamiliar two-dimensional space, a kind of Flatland, described in the novel *Flatland: A Romance of Many Dimensions* (Abbot, 1884), and "presence" in this space was a new ball game all together. These learners had to mentally reconfigure their classroom experience along the lines of their social media and new media experience, in the form of composition-reception of messages, chats, posts, reels, stories, comments, etc. The glitches and other disruptions resulted in technology being less than transparent (Mahajan et al., 2021; Rosenberger & Verbeek, 2015), which is a major irritant in any learning context. Further, technology-mediation, together with the health crisis, diluted some of the crucial aims and objectives of the "hidden curriculum" (Jackson, 1990): good work-ethics, discipline, punctuality, diligence, and perseverance.

Fieldnotes: Achievement of Learning Outcome

The course could only partially achieve its major learning outcome: emphasizing the relevance of Shakespeare for a posthuman society, by highlighting Shakespeare's artistic advocacy of "species being" for the formation of a more egalitarian society. Absence of learner queries, questions being a crucial part of the internalization of ideas, and online access to non-curated open-source materials were the chief obstacles to realizing the learning outcomes. Both were products of technology-integration and technology access (Ihde, 1990). Student term-papers, and their seminar presentations confirmed this impression.

Fieldnotes: Hermeneutic and Alterity Relations

The technology-learner hermeneutic relation was thus a complex one, with the reader-text hermeneutic relations only partly achieved through inadequate technology-integration, aggravated by random data accessed through digital technologies. The totally teacher-driven classroom had a poor resemblance to the vibrant, Gen-Z graduate classroom.

The alterity relation with technology too was very weak. The quasi-alterity that Ihde considers as the defining character of technology-human relations (Ihde, 1990, p. 100), while it did obtain between the teacher, learners in the technology-enabled classroom, took considerable effort on the part of both the stakeholders. This technology-enabled classroom, which should have been a zone of communication between the human teacher and the students, ended up as a space where technology was "thick", all too visible. The teacher's voice had to be imagined as embodied presence (Arbaugh & Hwang, 2006; Baker, 2003). This was also true of my (the teacher's), own relation with the online learners, who were mere names on the screen. The online group of learners had to strain to make sense of the occasional teacher-offline group interaction. Here, the culprit is the learners' digital experience, with inputs rich in multimedia elements. The digital experience has resulted in the formation of a new horizon of expectations (Gadamer, 2013). The call for the gamification of education (Deterding, 2016; Doherty, 2017; Gee, 2003; McGonigal, 2011) vouches for this new horizon.

The exciting graduate seminar turned out to be a totally dull affair. There was poor participation in the presentations and discussions. The weak quasi-alterity of student relation to this techno-space (Lefebvre, 1991) is evident from the feedback: "I am waiting to come back to the University!"

Fieldnotes: Key Takeaways

A few key takeaways from this experience:

- Methodically planned lessons do not automatically ensure effective classroom interaction and transaction
- Topics/issues that seem on paper to be perfect fit for a group may not always be a good match
- The presence of a human teacher is a crucial part of the classroom experience, and its importance cannot be overstated
- Learner autonomy is fraught with issues, needing thoroughgoing research
- Assessment should synchronize with learning opportunities; and the latter must be clearly defined for each group, for specific periods of time
- The number of issues related to human-technology relations must be fully addressed before full-scale technology integration is attempted
- Campus life works in mysterious ways in the self-fashioning of learners, so studies in this area are crucial

Conclusion

These notes and observations from a Global-South classroom, along with other similar documents, ranging from blogs to scholarly essays, could be collated, as a first step towards the creation of a network of scholars interested in human-technology classroom relations. This research cluster could use the data and the critical mass — studies, and theoretical

explorations, as raw material and guidelines respectively, to arrive at an outline of the future classroom. This could go a long way towards the creation of micro and macro structures, from infrastructure to classroom-cultural structures, to deal with unforeseen educational crises.

Author's Note

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