Intersubjectivity, Materiality, and Virtuality: What COVID-19 Day-life Taught a Teacher about Navigating a Global Crisis

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Abstract

This paper explores the intersections of intersubjectivity, materiality, and virtuality through the lens of daily life during the COVID-19 pandemic, focusing on the experiences of a teacher. Using a self-ethnographic approach, it examines how subjective identity intertwines with material and virtual dimensions amid quarantine conditions. The study delves into how professional and personal boundaries blurred, as digital applications, social networks, and online interactions became integral to teaching and everyday activities. It highlights the impact of these changes on our understanding of human-technology relationships, emphasizing the need for new definitions in a technologically mediated society. Through detailed examples, the paper illustrates the complex intersubjective experiences that emerged in a context where the virtual increasingly permeated the material, redefining educational practices and social interactions.

Keywords: Intersubjectivity, Materiality and Technology, COVID-19, teacher

Introduction

The recent COVID-19 pandemic, which has spread globally since 2020, necessitated social isolation measures to curb the disease. Consequently, many professionals, including teachers, had to adapt to working from home. This shift integrated teaching sessions into the home environment, introducing new practices and perspectives regarding the use of digital applications, social networks, and online interactions. This paper aims to explore the intersubjective experiences during quarantine, characterized by constrained and forced isolation at home. It will examine intersubjectivity, materiality, and virtuality within the daily life context, viewed from the perspective of a teacher.

The starting point of the reflection is that *"the gap between technoscientific progress and an understanding of its significance in human life seems wider than ever"* (Chimirri & Schraube, 2019).

Indeed, there is a discrepancy between the increasing technology reality and the human ability to give meaning to their effect in personal and professional lives (Di Gironimo, 2011), particularly if we consider the emergent technologies like virtuality and augmented reality. Humanity needs new definitions in the light of increasing technology-mediated society, and the traditional boundaries to define the human are moving, with the need to include more-than-human worlds. Arguments for the psychology of technology are so considered again in the discussion: *"We rapidly assimilate new technologies into our lives; we welcome and embrace them. But too*

seldom do we ask questions about the ways they have changed our lives – sometimes irrevocably" (Gergen, 2000, p. xiii).

Inspired by the reading of *"How we became posthuman: Virtual bodies in cybernetics, literature, and informatics"* (Hayles, 2000), in the first sections, the reflections go around the intersubjectivity, materiality and virtuality. Then, some examples are proposed to grasp the sense of intersubjectivity lived with materiality and virtuality, in a loose boundary between professional and personal boundaries.

Augmented Classroom and Home

Different authors have started, already in science fiction and now always more realistically in educational literature, to imagine a future class with Artificial Intelligent agents as a natural partner of teachers and students. As an imaginary scenario, a future AI agent, virtual or embedded in a robot, with sophisticated language and vision capabilities, can interpret each signal and gesture, detecting and regulating students and teachers' performance, behaviours, and emotions. This classroom scenario as an intelligent setting is appealing, making the classroom well augmented and full of opportunities to unfold. The classroom tends to lose a degree of materiality slowly and start to become more virtual (Castañeda & Selwyn, 2018): *"From there it is a small step to perceiving information as more mobile, more important, more essential than material forms. When this impression becomes part of your cultural mind-set, you have entered the condition of virtuality"* (Hayles, 2000, p. 19). Virtuality is the cultural perception that information patterns interpenetrate material objects. Imagining a classroom with wishes, it desires to become more virtual, embrace new opportunities, and connect with the world.

The Digital Report by Meltwater and We Are Social (2024) highlights the significant impact of COVID-19 on the integration and appropriation of ITC in education. It raises questions about how the pandemic might spur innovation in this field (Ellis, Steadman, & Mao, 2020).

Adapting to the new setting—such as using the kitchen or dining room in varied family and personal configurations—implies a blurring of boundaries between personal and professional routines. Online connections seamlessly transition from personal to professional contexts, ranging from teaching in Zoom classrooms to calling grandparents on Skype and having virtual drinks with friends. During the COVID-19 pandemic, home-working extended the classroom into the homes of teachers and students, with computer mediation becoming predominant. As a result, many of us have begun or are enduring a massive and continued consumption of the internet for professional use in both developed and emerging societies.

These new experiences of social isolation and online social connections could bring insight into our relationship with technology, materiality and virtuality. The intersubjectivity mediated by technologies questions our body, human and not human others, and process of knowledge, like the work of Hasse (2020) that analyse how robots and cyborgs teach us about being ultra-social. So, new questions could be raised about the increasing virtuality of our social interactions, making more evidence about *"the virtual experiences enacting a division between the material body that exits on one side of the screen and the computer simulacra that seem to create a space inside the screen"* (Hayles, 2000, p. 20). Ultimately, these insights challenge us to reconsider how our digital and physical worlds intersect and influence our daily lives.

Understanding the impact of these changes requires delving deeper into the concepts of intersubjectivity and identity. As we navigate these new virtual spaces, our sense of self and our interactions with others are continuously reshaped. This evolution is particularly significant in the context of education, where the roles of teachers and students are redefined through digital mediums. In the following, some points are discussed.

Intersubjectivity with Others and Objects

One definition of identity is as "protean", referring to the Greek god Proteus of many forms, according to which identity is constantly subject to change in an attempt to escape the demands of knowledge of the Other. From a general psychology perspective, intersubjectivity is usually understood as a state in which two or more interacting persons can achieve mutual understanding by sharing the meanings and purposes of the interaction (Rommetveit, 1974). Intersubjectivity is thus a primary condition for the foundation and explication of the identity. Vygotsky stressed the social nature of identity – *"I am a social relation of me to myself"* (1989, p. 67) – as similar to other perspectives as the Dialogical Self (Hermans & Kempen, 1993).

Intersubjectivity has repeatedly been noted as being of fundamental importance in educational activities. Learning is not inherent in pre-established knowledge but is based on dialogical interaction with the Other. In these contexts, intersubjectivity is created at different levels: between institutions, between teachers in different institutions, between teachers in the same institution, between teacher and pupil within the classroom or, where educational interaction between peers is permitted, between pupils.

In digital communication environments, the intersubjective dimension of identity becomes even more critical: a proliferation of opportunities to meet other subjects, other cultures and other points of view allows a continuous redefinition of the self in terms of the interplay between possessed positions and the acquisition of new positions deriving from relationships. Human-tech hybridity emerges at extended cognition and distributed agency (Duus, Cooray & Page, 2018).

Recent perspectives on identity mainly discussing the possible relationship between increasing and invasive technologies. The presumption of a stable agency and will is compromised, giving space a multi disparate and distributed desires and wills – not distinguished from the human and not-human others: *"In the posthuman, there are no essential differences or absolute demarcations between bodily existence and computer simulation, cybernetic mechanism and biological organism, robot teleology and human goals"* (Hayles, 2000, p. 3). More, subjectivity is emergent propriety produced in part by materiality. The self is connected in a dense network of relations with humans, objects, and environments as vibrant matter (Bennett & Maton, 2010).

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Knowledge, Embodiment, and Materiality

Hayley (2000) discussed that the relation to the information and materiality leads to a common hierarchy in which information is given the dominant position and materiality runs a distant second. The danger is that seeing the information only as an abstract process from a material base meant that information could become free-floating, unaffected by changes in context. As not distinctive entities, technology does not simply inscribe pre-existing through, but transforms the message and enfolded together as they are encoded and decoded, mediated and remediated. *"Concept and artefact engage each other in continuous feedback loops. An artefact materially expresses the concept it embodies, but the process of its construction is far from passive"* (Hayles, 2000, p. 15).

A "bone knowing" emphasises intuit, imaginative and embodied ways of knowing – moving away from the bounded, rational subject. According to Hayles (2000), embodiment differs from the concept of the body in that the body is always normative relative to some set of criteria: *"Whereas the body is an idealised form that gestures toward a Platonic reality, the embodiment is the specific instantiation generated from the noise of difference. Relative to the body, the embodiment is other and elsewhere, at once"* (p. 196). She proposed some points to stress the knowledge and embodied process (p. 205):

- Incorporated knowledge retains improvisational elements that make it contextual rather than abstract, keeping it tied to its instantiation circumstances.
- Second, it is deeply sedimented into the body and is highly resistant to change.
- Third, incorporated knowledge is partly screened from a conscious view because it is habitual.
- Because it is contextual, resistant to change, and obscure to the cogitating mind, it has the power to define the boundaries within which conscious thought takes place.
- Embodiment mediates between technology and discourse by creating new experiential frameworks as boundary markers for creating corresponding discursive systems.

Study

The examples proposed are taken by the personal routines at home or open space and gym sessions during the sanitary restriction due to COVID in 2020. The personal and the professional are often overlapping. In one week, I recorded my interactions with technology in daily life on a note. Also, I recorded my desktop activity with OBS studio's application (2 hours in the morning one week). This qualitative exploration will be used to report some episodes.

As a methodological perspective, grasping the connection between materiality, virtuality, and intersubjectivity requires what Geertz (1973) famously called a 'thick description': a rich and layered account that embraces inconsistencies and avoids seeking a definitive 'solution' or conclusion (Fenwick & Edwards, 2010).

About qualitative inquiry in everyday life, Brinkmann (2012) stresses how it is not easy to say when one's everyday observation end and more traditional and structured research observations begin. More, de Souza Bispo & Gherardi (2019) advocate that all researchers' judgments and interpretations draw on an affective process that supports the researcher's meaning-making of organisational phenomena. Embodied practice-based research combines the researcher's interpretation, judgment, and affect performances, where judgement affects our actions. So, the qualitative researcher is always in a position of "becoming-with-data" (Gherardi, 2018).

Example 1: Activating a Digital Intersubjectivity

During the quarantine, the walking stroll was allowed for a limited time. In a morning walking session, this ban welcomes me and my effort to reach it (**Figure 1a**). Similarly, when the sport gym was open, the virtual coach welcomed me happy, and we enjoyed the time together (**Figure 1b**).

Figure 1a. ***French pub of a "Radio station" in a large light panel near a bus stop***

Figure 1b. ***Virtual assistant in the gym***

Figure 1

a. **b.**

(Images copyright M. Impedovo, 2020)

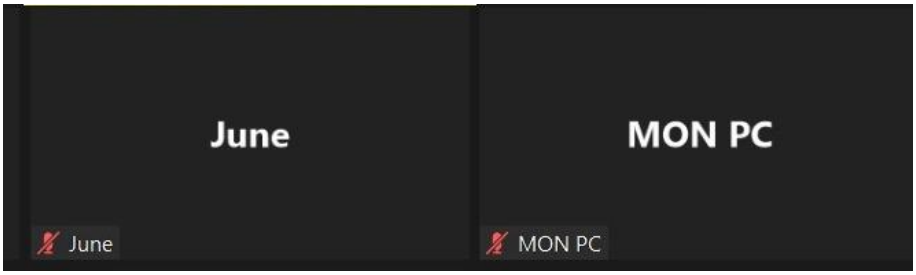
In **Figure 1a**, a radio station advertisement is promoted on a large light panel near a bus stop. The panel asks the reader, "and you, how are you?" The advertisement triggered a reactive response to the proposed question, "Fine, thanks." I was solicited to react to the panel. In the solitude of the social distance, the message produces a possible communicative connection: *"The interplay between semiotic components and physical attributes that gives rise to materiality*

simultaneously and with the same gesture gives rise to subjects who both perceive and are acted upon by this materiality" (Hayles, 2000, p. 107). This dynamic illustrates how material forms of communication can evoke emotional and cognitive responses, shaping our perceptions and interactions even within solitary environments.

In **Figure 1b**, the France gym proposed an automatic entry with a badge and variable spaces. The sessions of sport are autonomous in small cabin boxes, with one, three or five slots. Before entering the box, you can select one virtual coach from a limited gallery of sessions – classed by time and typology. The virtual assistant in the gym welcomes you positively and pushes you with different statements during all the sessions. Here are some statements during the sessions: *"Hello, I am Mark! Are you ready? We will do this together; If I can do it, you can too! I am watching you, don't ever think to reduce the speed! I enjoyed this session; I hope your t-shirt is wet like mine; See you next time, bye-bye!"* The repetitive sportive sessions more than once a week open familiarity with the virtual figure, with a trust in his professionality and engagement.

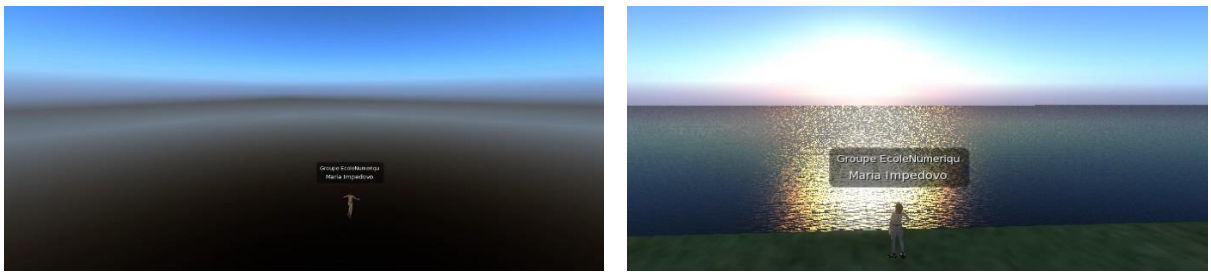
Educational literature reports different stresses related to the use of Zoom for teaching and learning (de Oliveira Dias et al., 2020). The personal routine alternated with the professional one. The teaching sessions were scheduled and performed mainly with Zoom. Soon, a general dynamic emerges, like the shared issues of closing the absence of the students' video camera. In **Figure 2**, one student doesn't open the camera, and the name is "My PC", in a total anonymous interaction.

Figure 2. ***Teaching in Zoom***



New tools and digital solutions were proposed to quickly increase students' interaction in a pedagogical update. In **Figure 3**, as the teacher, I am exploring a virtual world to familiarise myself with the setting before co-animating a teaching session. The open space and the relief of free exploration contrast with the imitated time outside – in some urgent crises, reduced to the maximum of one hour for a day.

Figure 3. ***Exploration of a Virtual World***



Due to the absence of interactions, the sense of solitude in the virtual world was quickly filled with the students and the colleague's avatar interactions, including chat and voices.

In these three examples: in the street, at home, in the gym or at home, the solitude was broken by the interaction with the screens as television, smartphones or computers, always open and ready to interact with us. It emerges a form of "intertimacy" in the examples of the virtual gym, obstacles in Zoom by the missing camera and microphone – *"as the process by which two selves meet in the computer 'apparatus' and, through their interactions with the apparatus, reconstitute from bits and bytes an impression of another"* (Hayles, 2000, p. 57). We can grasp a digital intersubjective with the screens and the machine, where or how the human body has already been bound together with the machine, reduced to pixel and codified: *"this vision implies that at some point (or many points) our flesh will circulate through the cybernetic circuit, miniaturised so that it can slip through the "mouth of the funnel" and merge with other subjectivities into a collective we"* (Hayles, 2000, p. 60).

Example II: Internet Surfing Activity as a Narration

Internet surfing is a rich and continuous activity that we are accustomed to, often multi-tasking—listening to videos, writing, and checking notifications. In the following, I report the clicking activity during one working session on the PC. The table documents a 20-minute session of activity on a PC, detailing various digital tools and corresponding activities. Specifically, in the selected time, I decided to attend a Webinar session on Zoom about pedagogical training, while engaging in other digital activities.

Table 1

A 20-minute session of activity on a PC, detailing various digital tools and corresponding activities

Time	Digital Tool	Activity
0024	Zoom full screen to listen to the keynotes with PowerPoint presentation	Listening, no clicking activity
0735	Desktop with Zoom in small vision	Listening, no clicking activity
0740	Chat in Zoom	Opening and reading the message
0753	Professional email	Checking email
0857	Personal email	Reading one email
0901	Social network webpage	Make a screenshot and save a picture in a folder
1002	Zoom full screen	Listening, no clicking activity
1015	Screenshot application	Make a screenshot and save a picture in a folder
1028	Zoom full screen	Listening, no clicking activity
1252	Screenshot application	Screenshot of Zoom and put in a folder to record a figure
1848	Zoom full screen	Listening, no clicking activity

This table provides insights into the multitasking nature of internet surfing during a professional session, involving tasks such as attending Zoom sessions, managing emails, and capturing screenshots for documentation purposes. So, the main activity of Zoom as a passive listener is interconnected with other marginal activities, like checking email and social networks.

Also, in **Table 2**, another day session of working on the PC, the main activity is to listen to the Zoom meeting. Also, multiple applications are opened to perform small activities, reading and checking email, file in PDF quickly, Google Drive, and record screenshots.

Table 2

Following a Zoom

Time	Digital Tool	Activity
00.17	Zoom	Listening, no clicking activity
01.29	Email professional	Open new table to check the arrive of new email
01.37	Email professional	Pause of the clicker (phone)
01.53	Zoom	Listening
02.53	Desktop	The pause of the clicker (phone)
03.25	Zoom	Click around Zoom
05.13	Screenshot application	Make a screenshot and save it in a folder
05.32	Screenshot application	Make a screenshot and saved in a folder
06.24	Professional email	Checking
06.27	Social network web page	Checking
06.34	Professional email	Revising an email
07.07	Online Drive	PDF downloaded and moved in another folder
07.30	Opened Zoom in full screen	Listening, no clicking activity
07.55	Online Drive	Creation dossier
08.17	Online Drive	Checking file, moving and rename it
09.15	Email professional	Writing an email and update the PDF to the email
09.50	Zoom in full screen	Listening (random clicking)
10.10	Zoom in full screen	Listening, no clicking activity
11.29	Zoom in full screen	Audio extra from what app
12.07	Zoom in full screen	Make a screenshot and saved in a folder

The table illustrated the multitasking activities and digital tools utilized:

- **Zoom Sessions:** Throughout the session, there are multiple instances of engaging with Zoom in full screen mode and with a small vision, primarily for listening to keynotes and discussions without active clicking.
- **Email Management:** Professional and personal emails are checked and read, indicating concurrent engagement with work-related communication.
- **Chat and Social Networking:** Interaction in Zoom chat for messaging, and engagement on a social network webpage involving activities like taking screenshots and saving pictures.
- **Screenshot Activities:** Frequent use of a screenshot application to capture and save images from Zoom sessions, demonstrating documentation and record-keeping practices.

Overall, the table illustrates a dynamic digital workflow, highlighting how various tools are integrated for communication, information processing, and documentation purposes during a professional session. These activities unfold within the desktop environment, utilizing different software applications. At times, the session extends beyond the confines of the PC, such as listening to audio on a mobile phone. This reflects the broader role of computers as simulation machines that generate diverse environments, from local desktop applications to global networks (Hayles, 2000).

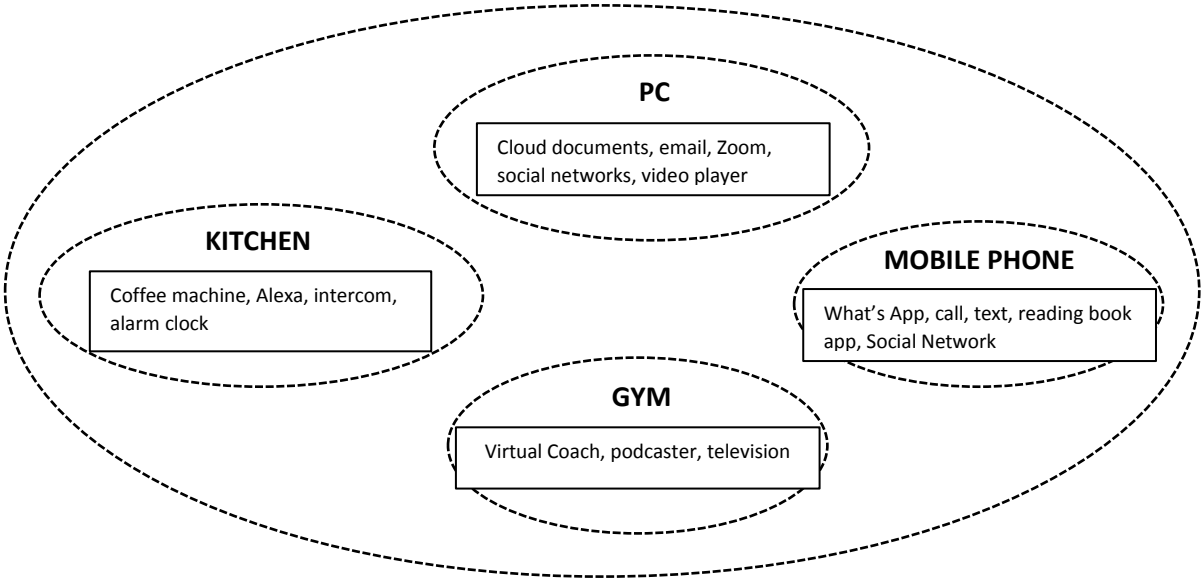
The transcription of the clicking activity recorded helps to display an occluded trajectory in which the eyes and the hand join in a digital circuit: *"Interpolated into the circuit, we metamorphose from individual interiorised subjectivities to actors exercising agency within the extended cognitive systems that include non-human actors"* (Hayles, 2000, p. 51). The human flesh is evoked by the clicking and jointly in the digital configurations of text, video, figures, audio.

Email allows professional contact with colleagues and the Google dossier with all the shared participants invited to work on the folders. Intersubjectivity is active in the common interest in Zoom and the willingness to contact the Zoom participants – like reading the chat. In the end, the activity of surfing emerges as a narration, where the subjective voice emerged as a body in and beyond the screen and a sense of presence due to the reflexivity in the digital interactions.

Example III: Mapping Techno-dialogical Transformation

Based on the earlier recording, this section reconstructs the network applications used throughout a day as a teacher in quarantine, visualized in **Figure 4.**

Figure 4. ***The network applications used throughout a day as a teacher in quarantine***



The complex layering also has the effect of locating subjectivity ambiguously between applications and settings in a juncture of multiple activities performed. These summative reconstructions show how the different elements are interconnected in a system, where materiality and virtuality are interconnected. The information is perceived as a thing that separates from the medium, as something only mediated by the tool:

> *"It is proposed as a remediation, the cycling of different media through one another. These processes are going on all around us, including computer screens being arranged to look like television screens, television screens with multiple windows made to look like computer screens, print books mimicking computers, computers being imaged to look like books. One term put forward to describe these complex relationships is medial ecology. The phrase suggests that the relationships between different media are as diverse and complex as those between different organisms coexisting within the same ecotone, including mimicry, deception, cooperation, competition, parasitism, and hyperparasitism."* (Hayles, 2000, p. 5)

The subjectivity emerged from the data: how to interact, react, reply, connect, share and act in the medial ecology, where the subjectivity moves *through* the screen. The intersubjectivity is negotiated, mediated, and remediated through applications, devices, and spaces.

In conclusion, navigating this medial ecology illuminates how subjectivity and intersubjectivity evolve through the intricate interplay of digital tools, devices, and virtual environments, shaping our interactions and experiences in contemporary educational and professional contexts.

Discussion

During quarantine, the solitude with the computer was elaborate in digital intersubjectivities that support us day to day. Also, if we were socially distant during the quarantine, we co-lived with technologies. The continuous notifications and circularity between applications and devices helped keep a social relationship with others (with voice, camera), virtual others (avatars, animations), and machines. Our co-living was only apparently dominated and managed by the human side.

In these continuous processes of circuitry between applications, our identities (I sport; I teacher; I woman) are complemented by marginal identities (I as Instagrammer) and I-terminal identities (I avatar; I Zoom participant), linked to our continuous interaction between applications and technical objects. In a posthuman collectively, the "I" join in a self-shaping "we" made by continuing interactions and contrastive willing made of tweets, likes and meme sharing: *"Data are thus humanised, and subjectivity is computerised, allowing them to join in a symbiotic union whose result is narrative"* (Hayles, 2000, p. 39). The reflexivity emerges in this process, an observer role that gives a sense to it, searching for meanings. This observation is based on a positionality rather than personality, according to Maturana and Varela perspectives: "We become *observers* through recursively generating representations of our interactions, and by interacting with several representations simultaneously, we generate relations with the representations of which we can then interact and repeat this process recursively, thus remaining in a domain of interactions always larger than that of the representation" (as cited in Hayles, 2000, p. 143). So, the observer's action distinguishes an autopoietic unity from its background or medium.

More, the study opens a reflection on how the settings have a role in the process of knowledge. The total configurations of the technology around us make us ready to deal with change – in which both human and non-human actors "think." When conceptualizing the human subject as an autonomous entity with clear boundaries, the human-computer interface tends to be viewed as a stark division between the tangible reality of everyday life and the perceived illusion of virtual reality. This perspective often obscures the profound transformations brought about by advancements in virtual technologies. From a distributed cognition perspective, on the contrary, the human capacity is anchored and expanded to a situated and in movement configuration: *"In this model, it is not a question of leaving the body behind but rather of extending embodied awareness in particular, local, and material ways that would be impossible without electronic prosthesis"* (Hayles, 2000, p. 291).

Reflections: Where Are We Now and What Have We Learned

The COVID-19 pandemic has reshaped our understanding of intersubjectivity, materiality, and virtuality, particularly in the context of day-to-day life as experienced by educators. This crisis forced a rapid and pervasive integration of technology into our personal and professional lives, providing a lens through which to examine how our identities and interactions are mediated by digital platforms.

What We Are

Through the COVID-19 crisis, we have come to realize that our identities are increasingly hybrid, blending human and technological elements in complex ways. This hybridity is not a future possibility but a present reality, where our subjective experiences are continuously mediated by virtual interactions. We are no longer just teachers or professionals in a physical space; we are also avatars, usernames, and digital presences. Our sense of self has expanded to include these virtual dimensions, making us subjects who operate within a network of human and non-human actors.

The pandemic highlighted how deeply we rely on technology to maintain our social connections and professional responsibilities. In a world where physical interaction was severely limited, digital interfaces became our primary means of communication, blurring the lines between personal and professional spaces. This blending forced us to adapt to new forms of intersubjectivity where interactions with others often occurred through screens and digital avatars.

What We Have Learned

- **Intersubjectivity Reimagined:** The pandemic has shown us that intersubjectivity—the mutual understanding and shared meaning between individuals—can be achieved through digital means. Despite the lack of physical presence, meaningful connections can still be formed and maintained through virtual interactions. This reimagining of intersubjectivity challenges traditional notions of social interaction and suggests that our capacity for empathy and understanding is adaptable to new mediums.
- **Materiality and Embodiment:** Our relationship with materiality has also evolved. Technology is not merely a tool but an integral part of our lived experience. The embodied nature of our interactions with technology means that our physical and virtual selves are intertwined. We have learned to navigate a world where material and virtual realities coexist, and our sense of presence extends beyond physical boundaries into digital spaces.
- **Reflexivity in Digital Interactions:** The increased use of digital tools during the pandemic has fostered a heightened sense of reflexivity. We have become more aware of how our interactions with technology shape our identities and our relationships with others. This reflexivity is crucial for understanding the impact of technology on our lives and for negotiating our roles within this new digital landscape.
- **Distributed Cognition and Extended Agency:** The crisis has emphasized the concept of distributed cognition, where human capacity is extended through technological means. Our ability to teach, learn, and communicate has been enhanced by digital tools that augment our cognitive and social capabilities. This extended agency allows us to operate effectively within a complex network of digital interactions, highlighting the importance of adaptive and flexible thinking.

In conclusion, today is more evident how our identities are fluid and adaptable, capable of encompassing both material and virtual elements. As we move forward, it is essential to continue reflecting on these experiences to better understand the evolving nature of our intersubjective,

material, and virtual realities. The insights gained during this crisis will be instrumental in navigating the challenges and opportunities of an increasingly digital world.

Practical Implications for Teachers

The intersection of intersubjectivity, materiality, and virtuality, particularly highlighted during the COVID-19 pandemic, presents several practical implications for educators:

- **Adapting Pedagogical Practices:** Teachers need to adapt their pedagogical approaches to integrate digital tools and virtual platforms effectively. The shift towards online teaching has blurred the lines between professional and personal life, requiring educators to maintain a balance while leveraging technology to enhance learning experiences.

- **Enhancing Intersubjective Engagement:** Understanding intersubjectivity is crucial in fostering meaningful interactions in virtual classrooms. Teachers should encourage dialogical interactions among students and themselves, creating a collaborative learning environment despite physical distances.

- **Navigating Digital Boundaries:** With the home becoming an extension of the classroom, teachers must navigate the boundaries between personal and professional life. Establishing clear guidelines for communication and expectations in virtual settings can help maintain professionalism and respect privacy.

- **Embracing Technological Integration:** Embracing technology integration in education goes beyond mere tool usage; it involves understanding how these tools mediate learning experiences and reshape educational practices. Teachers should continuously update their digital literacy skills to effectively engage with students in virtual environments.

- **Promoting Critical Reflection:** Encouraging students to critically reflect on their digital interactions and the impact of virtuality on their social and educational experiences can foster a deeper understanding of technology's role in their lives.

- **Supporting Emotional Well-being:** Recognizing the emotional challenges of virtual learning and social isolation, teachers play a crucial role in supporting students' emotional well-being. Building trust and rapport through virtual channels and being attentive to students' emotional cues are essential.

- **Professional Development:** Continuous professional development focused on digital pedagogies, online communication strategies, and adapting curriculum to virtual formats is essential. Teachers should collaborate with peers and engage in reflective practices to refine their teaching approaches in a technology-mediated environment.

- **Ethical Considerations:** Addressing ethical considerations such as digital privacy, online etiquette, and equitable access to technology is vital. Teachers should advocate for inclusive practices that ensure all students can participate fully in virtual learning experiences.

By embracing these practical implications, educators can effectively navigate the complexities of intersubjectivity, materiality, and virtuality in education, ensuring meaningful and inclusive learning experiences for all students.

The Need for New Definitions of a Technologically Mediated Society

The COVID-19 pandemic has highlighted the critical need for new definitions of a technologically mediated society, especially as technology has increasingly invaded homes and schools. The recent request by the US Surgeon General to put warning labels on social media exemplifies the seriousness of technology's impact in the post-COVID western world. Teachers have observed a sharp increase in online bullying among students, leading to significant trauma that can have intergenerational effects.

- **Addressing the Impact of Social Media:** Schools need to develop comprehensive policies and educational programs that address the pervasive impact of social media on students' lives. This includes educating students about the responsible use of social media, recognizing the signs of online bullying, and providing support for those affected by it. Teachers should be trained to handle such issues sensitively and effectively.
- **Revising Educational Frameworks:** The integration of technology into education necessitates a revision of existing educational frameworks. This involves redefining the roles of teachers and students in a digital age, ensuring that technology is used to support learning objectives rather than distract from them. Schools should create guidelines that promote healthy technology use and foster digital literacy among students.
- **Embedding Ethical Considerations:** Ethical considerations must be embedded into the curriculum to help students navigate the complexities of a digitally mediated world. This includes discussions on digital citizenship, privacy, and the long-term implications of their digital footprint. Educators should guide students in understanding the ethical dimensions of their online behavior and interactions.
- **Fostering Resilience and Coping Strategies:** Given the potential for technology-induced trauma, schools should implement programs that build students' resilience and provide coping strategies for dealing with online stressors. This includes mindfulness practices, peer support groups, and access to mental health resources. Teachers can play a pivotal role in creating a supportive environment that encourages open discussions about mental health and well-being.

By addressing these critical implications, educators can help shape a more responsible and informed approach to technology use in schools, ensuring that it serves as a tool for positive development rather than a source of harm.

Subjectivity and Intersubjectivity in Schools

The data from the study highlight the fluid nature of subjectivity in a digitally mediated environment. Teachers must understand how to interact, react, reply, connect, share, and act within this medial ecology where subjectivity moves through the screen. Intersubjectivity is negotiated, mediated, and remediated through applications, devices, and spaces.

- **Concrete Intersubjective Practices:** In a school setting, intersubjectivity can be mediated and negotiated through intentional practices that foster connection and collaboration. This includes using interactive tools like discussion forums, video conferencing, and

collaborative platforms that allow students and teachers to share their thoughts and feedback in real-time.

- **Creating Mediated Spaces:** Teachers can create spaces within digital platforms that encourage students to express their identities and engage with others. This could involve setting up virtual "breakout rooms" for small group discussions, using social media responsibly for class projects, or integrating multimedia assignments that allow for creative expression.
- **Negotiating Intersubjectivity:** Teachers can facilitate the negotiation of intersubjectivity by promoting active listening, empathy, and respect in online interactions. Structured activities that require students to work together on problem-solving tasks or peer review each other's work can help build a sense of shared understanding and mutual respect.

By addressing these critical implications, educators can help shape a more responsible and informed approach to technology use in schools, ensuring that it serves as a tool for positive development rather than a source of harm. This holistic approach to teaching in a technologically mediated society can help students navigate the complexities of their digital and physical worlds, fostering a balanced and healthy relationship with technology.

Conclusion

The COVID-19 crisis has profoundly reshaped our daily lives, compelling us to reconsider the roles of technology, materiality, and virtuality in shaping our intersubjective experiences. Technologies, viewed as possibilities rather than necessities, offer us the opportunity to understand ourselves as embodied creatures living within and through embodied worlds and embodied words (Hayles, 2000). Despite the increasing virtuality of our interactions, our embodied experiences remain local, specific, and present, underscoring the fundamental nature of our human existence.

This paper aimed to illuminate the often unseen, mundane, and routine ways in which technologies develop and integrate into our lives and societies, particularly through the lens of a teacher during quarantine. By examining the intersubjective opportunities that arise at the intersection of materiality and virtuality, we can gain insights into how these dimensions interweave to form new modes of existence and interaction.

Looking forward, the next steps involve exploring our dialogical engagements with intelligent agents and understanding how AI will interconnect with our thinking, feeling, and sensing of the environment. As we navigate this evolving landscape, it becomes crucial to maintain a reflexive awareness of our positionality within these technologically mediated experiences, continuously seeking to balance the virtual and the material in our quest for meaning and connection.

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