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Abstract:
This ethnographic research was conducted in one of the physical training institutions that offer the Laban/Bartenieff Movement Studies (LBMS) certification program in Berlin in 2021. Because of the COVID-19 pandemic crisis, the training was held in a hybrid format in which some participants were in the studio, and others were attending remotely via Zoom. Zoom-mediated movement training for long hours revealed how the intervention of telematic technologies challenged practitioners’ sensorial experience and sense-making process. Moreover, bringing co-located and remote participants’ experiences together in the hybrid setting disclosed different modes of interaction dynamics in the studio and online. Overall, participants described their hybrid experience as a clash. In the article, starting from unfolding those clashes, I discuss ‘How does remote participation through telematics challenge participants’ sensorial experience?’, ‘What can and cannot be transmitted through online mediation?’ and ‘How does remote interaction through a telematic system (Zoom) affect the shared sense-making process in the hybrid format setting?’.

Key Words: Hybrid movement training, remote intercorporeality, remote interaction dynamics, remote sense-making, zoom-mediated movement training.
1. Introduction

In the summer of 2021, following the initial COVID-19 pandemic crisis, I conducted ethnographical research in one of the physical training institutions that offer the Laban/Bartenieff Movement Studies (LBMS) certification program in Berlin. The LBMS training is designed to heighten and develop the awareness of bodily experience by inserting theoretical perspective into participants' movement experiences. In this way, the program intends to produce holistically “moving knowledge”. I followed eight dancers' intensive training over a month, but unlike previous years, the training was held in a hybrid format using Zoom due to the Corona measures. Some participants were remote, and others were in the studio under strict pandemic precautions. In this article, I explore how telematic technologies intervene and shape participants’ experiences. I focus on how physical and online interaction dynamics were diversified, which became more apparent in the hybrid format since it brought remote and co-located participation together.

Digitalisation is not a new topic in the dance and movement field; however, the pandemic unexpectedly made us speed up our transition into the digital realm by increasing use of telematics. European Dance Network (EDN), which has 47 members in 28 countries, reported that online dance and movement training has accelerated over the last few years. (EDN, 2021) According to the previous report of EDN, during the first lockdown, 200 educational activities and more than 500 dance classes were organised in a short period only in member countries. That fired up ongoing discussion about the digitalisation of dance and movement experience. While some dance practitioners approach the digital space as a creative opportunity (Li, 2021), some see the acceleration of the shift to the digital world as ‘losing the ecology of our house’ or ‘killing the sensuality of dance and music in the face of two-dimensional screens and data streams’ (Fol, 2021).

‘But where danger is, grows
The saving power also.’ (Hölderlin Heidegger, 1977, p. 28)
In *The Question Concerning Technology*, Heidegger quotes Hölderlin’s lines to emphasise the revelatory power of technology while it might have a potential danger to humankind. (Heidegger 1977) For Heidegger, our encounter with technology can be a freeing claim if we use it as a reflection (Heidegger, 1977, p. 26). In the article, instead of discussing whether movement training in the hybrid format setting is an opportunity or a reduction of experience, following Heidegger’s argument, I will take the telematic system and other technological infrastructures as a revelatory source to question the essence of interaction dynamics emerged in the intersubjective sphere. While communication through a telematic system challenged how participants move, learn and teach movement, it also revealed our embodied knowledge production and shared meaning processes. In the research, I took the clashes between studio and online participants’ experiences as a starting point and built my discussions around those interrelated questions:

1. How does remote participation through telematics challenge participants’ sensorial experience?
2. What can and cannot be transmitted through online mediation?
3. How does remote interaction through a telematic system (Zoom) affect the shared sense-making process in the hybrid format setting?

2. **Theoretical Background**

Enaction theories that refer to embodied cognition constitute the basis of the research. According to the enactive paradigm, we as ‘autonomous’ agents do not passively receive the stimulus from our surroundings and turn them into representations in our minds, but we actively generate meaning through our ‘experiences’ in the world. (De Jaegher and Di Paolo 2007; Stewart, Gapenne, and Paolo 2014; Varela, Thompson, and Rosch 2017). That highlights the importance of interaction dynamics in the sense-making process and extends the concept of interaction from the agents to agents-environment coupling. (John Stewart et al., 2010; Varela et al., 1991). Moreover, ‘the
phenomenon of communication depends on not what is transmitted, but it depends on what happens to the person who receives it’ (Maturana and Varela 1992, p. 196). It suggests that the modes of interaction between bodies occur depending on what happens to those bodies in their environment. Thus, the enactive perspective lets us focus on the meaning that may manifest in different forms, such as feeling, impression, or image occurring here and now. Moreover, from a broader perspective, sense-making constitutes an intersubjective shared world. For Durt et al., ‘participatory and broader collective sense-making processes manifested in dynamic forms of intercorporeality, collective body memory, artefacts, affordances, scaffolding, use of symbols, and so on’. (Durt et al., 2017, p.2) It means that while cultural artefacts (including technologies), shared beliefs, ideologies, and patterned behaviour become integral to the sense-making process, emerged meanings enter the shared world and constitute the cultural realm. (Durt et al., 2017) Taking participants’ discomfort in hybrid format movement training as the main thread of the research, I will take interaction and meaning as emergent concepts and focus on how a telematic system intervenes in dancers’ bodily experience and shapes shared sense-making process.

I will take ‘digitalisation’ as a lens, as Ingvarsson suggests (Ingvarsson, 2021), to understand movement experience in LBMS training. I take into account the distinction between two terms: digitisation and digitalisation. While digitisation is about translating data and processes into bits and bytes (Prause, 2020), digitalisation is about ‘transformation’(Turqc,2018). According to that, digitalisation has a broader scope than only conversion. Digitalisation is ‘the ability of digital technologies. (Turqc,2018). Therefore, for Prause, digitalisation leads to fundamental changes by opening new thinking and approaches. (Prause, 2020). So here, I am using the term digitalisation to emphasise dancers’ ability to use and interact with those technologies in movement training rather than only converting bodies into bytes and bits.

It is also important to briefly mention the scope of the Laban/Bartenieff Movement System. LBMS is considered one of the branches under the somatic
movement practices with varied modalities such as yoga, Alexander Technique, Feldenkrais Awareness Through Movement or different massage techniques. In the 70s, Thomas Hanna used the term soma for the first time to describe his practices to emphasise the ‘experienced body’ from the practitioner's perspective, not only as a physical entity (Hanna 1986). One of the essential differences between LBMS and other somatic practices is that the system is built on both somatic and analytical perspectives. Mainly, Bartenieff Fundamentals creates its somatic characteristics, and Laban part makes its analytical aspects. LBMS is a model to study how we move and interact with our surroundings. So, the training aims to teach how the body-mind works in its environment through exercises focusing on four major domains: to experience, observe, understand, and create the movement. In the training centre where I did my fieldwork, the LBMS pedagogy is constructed based on multi-modal characteristics of movement experience to produce ‘embodied knowledge’. In the training program, teachers usually use ‘demonstration’ supported by verbal instructions to show movement sequences. ‘Imaginary’ is used to emphasise bodily connections or anatomical structures of the movement. ‘The hands-on technique’ is a specific pedagogical tool for tactile interaction. Participants study the movement themes through ‘touch’ to communicate, correct, visualise, and deepen their understanding. Moreover, individual and group ‘drawings’, ‘writings’, ‘discussions’ and ‘movement creations’ are part of the teaching strategy to enable participants to reflect on their personal and others’ movement experiences.
3. Methodology
This research uses ethnographical methodologies, including interviews, audio-video recordings, observations and field notes.

3.1. The Overview of the Fieldwork
Over a month, I participated in eight dancers’ intensive training, running six days a week from 10.00 am to 06.00 pm. Five participants in training have professional formal dance training, and others have different educational backgrounds, such as music, tango and dance-movement therapy. Two participants joined the classes online from their home, one completed the first half of the program remotely, and the other half in the studio, and the rest were at the studio. The classes were run by three main teachers and three guest teachers, all certified movement analysts (CMA). A technical assistant was also responsible for dealing with Zoom and other technical equipment.

The training was held in two different studios (Figure 2 and Figure 3). In each studio, all participants were asked to move in their own ‘corona kinesphere’, approximately four-square meters and marked with tape. When participants were asked
to travel through space, they had to wear their masks. They kept their social distance in most activities and barely touched each other. On a few rare occasions, depending on the theme of the class, teachers could touch students for brief moments for corrective purposes. At the beginning of the process, teachers and participants were overly cautious; however, towards the end of the four weeks of training, the tension in following COVID measures dissolved and the distance between participants got closer.

During the classes, dealing with technic created significant challenges for teachers and online participants. Beamer, microphone, computer, music system (player, speakers), portable camera, and extra speaker for online participants were involved in the training process. The zoom screen was reflected on the wall in each studio. The assistant was behind the portable camera all the time, following the teacher. Although the training team took all the precautions for technical issues beforehand, the absence of touch, trying to keep a social distance, and limited interaction with the online participants were challenging.
3.2. Data Collection and Analyses

I joined approximately thirty-five group classes, eight seminars, four one-to-one sessions and twelve observation and presentation sessions. Each of the sessions lasted two hours. Thus, I collected pretty reach audio-video material during the classes. However, like other participants and teachers, I had to stay in my ‘corona kinesphere’ most of the time. Moreover, I had limited access to online participants’ conditions since I was in the studio. So, the angles of my recordings are defined by my position in the studio. Yet, I had enough video recordings to analyse partner works, which I prioritised to understand different modes of interaction since they contain vivid information about how online and studio participants interact. I used Laban’s movement categories to analyse partner works.

During my data collection and processing, I also prioritised the materials from the first-person perspective. LBMS training has a self-observational stance embedded in the pedagogy. Participants were often asked to reflect on their bodily experience and express via different mediums by writing, drawing, sharing, performing and creating movement after each session. I used those reflections as my primary sources.
Especially sharing feedback circles provide reach audio material directly from participants’ first-person perspective. I transcribed those feedback sessions and all interviews and analysed them line by line, along with video materials.

4. **Outcomes of the Research and Relevant Discussions**

One of the online participants noted that:

‘…it was just a clash for me…I would be happier if it was only online. You see people…and you know what to expect. I could always see gallery people on Zoom; you are all equal…’

She is not the only one who thinks that the hybrid format is much more problematic than just online classes. Another participant, who joined two weeks of the training online and the other half in the studio, expressed that studio and online people were not receiving the same. Despite the hardship of being online, the participants and the teachers did not describe being online as problematic. What they define as a clash was bringing together online and physical participants in a hybrid setting.

Online participants’ statements about ‘equality’ and the frustration of not ‘receiving the same’ caught my attention not in terms of political and socio-economical connotations but in questioning what is lacking in their experience in the hybrid movement learning context. (Figure 3)
Figure 5: Model for learning spaces

I started scrutinising the issue by making a model of learning spaces. While the big box on the left side represents the studio, the boxes on the right represent the participants’ working spaces in their homes. The terms physical (or studio people) and online people have been used during training to address participants attending classes from different places. In spite of the fact that participants in three places are ‘online’ for each other, it looks like the distinction between online and physical people has been identified according to the place of the teacher and the majority of the group. That leads to two main discussions in hybrid format classes, which address why participants see themselves as unequal: the ways of ‘access to resources’ and the importance of ‘being with others in the physically shared space’.

Taking those two issues as main threads I gathered struggles and discussions raised during the classes under the two main categories which are inextricably linked. In the first part, I will define the challenges participants and teachers faced because of the affordances of Zoom and discuss how that affected their perceptual experience. In the second part, I will look at how remote intercorporeality impact on interaction dynamics and working on fine details of movement experience.

4.1. The Struggles Caused by Affordances of Zoom

Marshall McLuhan categorises the media as cold or hot based on users' contribution level in his book Understanding Media: The Extension of Man (1994). According to that, while hot media requires a low level of participation, cool media demands a high level of participant contribution, therefore, they have different impacts on users. (McLuhan, 1994) If we think about Zoom in terms of hot or cold media, the answer will alter depending on the use of it in its context. If we use Zoom to contact our family or friends, then it can be considered hot media compared to a telephone. However, in the movement or dance classes, it becomes cold media because it doesn’t provide all sensorial cues of movement experience and demands so much contribution from participants for full engagement in the process. Some studies describe the experience
of Zoom for long hours as ‘deficit-laden communication’ (Kappas and Krämer 2011) or ‘zoom fatigue’ (Bailenson, 2021; Stanford, 2021). Participating movement training on Zoom for long hours made online participants feel exhausted because they had to be multifocal; detached because they couldn’t be part of the group; and lonely because they felt lost during the classes. In this chapter, I will focus on how Zoom as a ‘cold medium’ has challenged participants’ perceptual experience in a hybrid format and caused those outcomes.

Photo 1: Group work in the training

4.1.1. The Digital Representation

The most major discomfort in training emerged from encountering digital representation of others’ instead of ‘physical presence’. Zoom software provides two-dimensional flattened representations of the ‘self’ made of configurations of digital data 1 and 0 on the screen, which we can describe as ‘digitisation of self’ or ‘digital images of self’. The shape, colour, size and other characteristics are only ‘representations’ of the presence, and they can change depending on the qualities of the devices, connection and resolution. For instance, the Zoom screen was reflected on the wall in the studio, so studio participants interacted with relatively bigger images of online participants. However, all the online people used their laptop screens and dealt with smaller images of the participants and the studio. A similar situation is also valid for the people’s sound. Technology provides us the digital representation of how people
and their environment sound. Thus, Zoom only affords reduced information about other people and their surroundings, providing only an approximate sense of them. In this sense, studio people had more advantages since they interacted with the presence of others and physical learning space instead of digitised re-presentations. During the interview, the participant who was online in the first half of the training and joined the classes in the studio at the second half indicated that she was surprised when she entered the studio for the first time because it looked much bigger to her on the Zoom screen. She was dancing with this bigger image in her mind. She also mentioned how her impressions about participants in the studio whom she’s never met before was different on Zoom. Similarly, other participants and teachers mentioned many times the challenges of dealing with approximate digital images.

Husserl’s different types of consciousness provide interesting perspective into participants’ encounter with digital representations. Husserl elucidate our interaction with things actually present in person and things that are not here and now. (Husserl 2005) He indicates that we perceive our actual present through our senses which he calls ‘presentation’, but also we have the ability to re-present our perceptual experience in different forms which tie us to the past, future and phantasy world which he indicates as ‘re-presentational consciousness’. (Husserl 2005; Marbach 2012). In short, there is perception (presentation) of an actual thing and re-presentation of things that are not here and now. He describes two different types of re-presentation. The first form is reproductive re-presentation which consists of memory, expectation, and phantasy; the second is perceptual re-presentation which he describes as image consciousness. For my research, what he describes as image consciousness is important because it is a type of awareness that occurs when we encounter a photograph, movie or scenery.(Brough, 2005,p.XLVI) Since the materiality of the image have substance here and now, we really perceive some aspects of it. Therefore, Husserl takes image consciousness as a partly presentation, special form of re-presentation, as ‘consciousness of inactuality’. (Brough, 2005,p. XLVII)
Furthermore, Husserl describes image consciousness as ‘consciousness of conflict’. Those conflicts derive from the image’s physical support, its surrounding and its subject. (Brough, 2005,p.XLVIII) We can look at the discomfort of working with digital representation in training in terms of ‘conflicts of image consciousness’, which I already give details above. From Husserl's perspective, the first conflict emerges from the physical support features of images on Zoom. In the studio, the wall where the Zoom screen is projected, the light which creates animated two-dimensional figures, and the sound waves comprise physical supports of the image that we perceive actually in reality. And the second conflict emerges from the tension between the image's surroundings and the surrounding where it is perceived. This conflict is fundamental for Zoom because the surroundings of digital images are different for both studio and online participants. So to speak, participants’ physical environments are other than online participants’ surroundings. There is no unity of environment in the perceptual sense from both perspectives. The third conflict stems from the difference between the subject and how it appears as an image. For Zoom, it corresponds to the difference between participants’ actual features and their images on the Zoom screen, such as the size, colour or shape etc. Husserl indicates that those conflicts overall enable us to perceive the image as an image, not as real. (Husserl, 2005). However, in our case, despite of those conflicts, participants still perceive those images as real, as the present. In other words, while Husserl posits that despite the image's actual, present qualities, we perceive them as not real (thanks to the conflict), in the case of Zoom, despite the unreal qualities, we perceive the digital images as real. Moreover, while Husserl considers presence as here and now, which is spatial and temporal immediacy, Zoom provides relatively temporal simultaneity but not spatial togetherness. Still, it is enough for participants to apprehend and interact with the images on Zoom as present here and now.
4.1.2. Authenticity, Memory and Verbalisation

Kappas and Krämer bring interesting discussions about representations of interactants in videoconferencing systems. For them, advanced software systems may cause the problem of authenticity in terms of identity, attributes and behaviour for interactants (Kappas and Krämer, 2011, p.8). During the LBMS training, the authenticity problem emerged in the different layers. As I've underlined in the previous chapter, the difference between digital and physical features was one part of the problem. Yet, the most critical issue about authenticity emerged at the behavioural level. Online participants admitted that they sometimes just ‘pretended’ or ‘faked’ when they felt lost in the class. From the studio perspective, it was not always clear to understand when they lost their engagement. Teachers also indicated in the interviews that it was hard to ‘read’ online participants. One of the teachers expressed that as follows:

‘In the studio, I know them, so I know where do I have to take care of, where is the right moment to give a correction… But if I don’t know them before, it is really hard to get it online. Where are they? Are they willing to go with me? Where is their resistance? This year, I didn’t know them before, so it was hard… I would like to know people first and then having online class … you know… sensing them… then it is easier.’

In the teacher’s comment, two crucial aspects come forward. The first one is the difficulties of reading non-verbal cues online, which happened many times during the training. Nonverbal cues can be expressed as eye contact, gestures, facial expressions, feelings, body postures etc., and they play an essential role in social interactions and the flow of the learning process. In the studio, I came across several moments when teachers realised that there were unclarities in participants’ understanding, and they stepped in to clarify the process accordingly. However, for online participants, the teacher had to ask verbally whether everything was clear. During the training verbalisation has become main modality in communication. Teachers had to describe
every exercise more explicitly with the words, even if they demonstrated it bodily because people on Zoom could not access the shared bodily realm. Thus, online participants did not only move mainly with teachers’ verbal instruction but were also asked by teachers to convert their bodily experience into words to understand if they could follow the class.

The second essential point highlighted in the comment is that teachers rely on their previous experience with participants to overcome the two-dimensionality of Zoom. It became easier to anticipate if they had worked with online participants. In other words, teachers recall their memories to fill the perceptual gap to predict the situation. From Husserl's perspective, both memory and expectation are forms of consciousness. While memory means ‘the consciousness of what is past’, expectation refers to ‘the consciousness of what is future’ (Husserl, 2005, p.XXXIV). So, here teacher indicates that she uses the memory of the participant, which refers to a modified re-presentation of what she perceived about the participant (Husserl, 2005, p.LVII) and carries this impression to the future when all the aspects of the participant are not available for her. During online mediated classes, re-presentational consciousness helped teachers stay connected with participants in their presence.

4.1.3. Dealing with Three Different Spaces in One Place

Another major challenge in the hybrid format has occurred related to the perception of space. Participants needed to deal with at least three different physical spaces during the training: studio and online participants’ private rooms (See Figure 3). When moving in their space, they had to anticipate other spatial conditions. For instance, the participants who experienced both online and studio conditions, indicated that she surprised when she saw the studio because it was bigger than it looks on the Zoom. The physicality of the spaces should be understood not only in terms of invariable features such as shape and size of the room but also variable measurable characteristics such as lighting, temperature and even sound. All those enter our perception of physical space. For instance, in the third week, studio participants had a hard time because of the high
temperature of the studio. They had to shift smaller studio for a few days, and it dropped the energy and motivation level of the training, while online participants did not get affected by the issue. Also, two online participants had to move on the carpet since they participated from their rooms, and they struggled with some of the floor works because of the friction factor. All those small details mattered since they directly entered the participants’ embodied knowledge production process. Moreover, different sensorial systems (visual, auditory and tactile) and motor systems operate together to produce the sense of space, as Jennifer M. Groh posits in *Making Space* (Groh 2014). She also indicates that ‘what you can see, hear, and feel at any given moment, the movements you made to get there, and your memory of those movements and knowledge of local geography all contribute to your sense of your position in the world.’ (Groh, 2014:4) In other words, our sense of space is based on environmental background information such as light, pressure, sound or temperature and our sensorial system's measurement of those qualities. Most importantly, Groh underlies that memory and knowledge does not only help us understand where we are but also where we are prompt memories and knowledge. (Groh, 2014:4) Therefore, while different spatial qualities lead to distinct spatial perceptions for online and studio participants, they also impact the learning outcomes of the training.

### 4.1.4. Autonomy

So far, I have tried to demonstrate that Zoom-mediated communication does not provide the whole dimension and richness of multisensorial cues as in encounters in physically shared spaces. Yet, according to enactive theories, we are autonomous agents who do not only react to an external stimulus with appropriate actions but ‘actively and asymmetrically ‘regulate’ the conditions of their exchange with the environment’ (John Stewart, et al., 2010). This exchange happens in our perception of the world without consciously thinking about it, which corresponds to what Merleau-Ponty describes as the ‘optimal or maximum grip of the world’ (Merleau-Ponty, 2002; Dreyfus, 1996). For instance, to get the best view of a painting in the gallery, there is
an optimal distance, and we tend to move our bodies accordingly. (Merleau-Ponty, 2013:316). Our bodies move in the space with a ‘perceptual attitude’, determined by our intention to have the optimal grip of our surroundings (Merleau-Ponty, 2013, p. 316). So, in the LBMS training, studio participants have more advantages to adjust themselves to the situation to grasp the maximum. For instance, participants in the studio could change their spots to see the reflection of the PowerPoint on the wall from a better angle, or they could get closer (keeping social distance) to the teacher to hear her. While moving in the studio, participants could switch between senses from listening to seeing to have the best grip of the situation. However, online participants were limited to the camera angle, the perspective of the person behind the camera, the software, devices or connection quality. During the training, many times online, participants asked the assistant to change the camera angle to be able to see or asked the speaking person to come closer to the microphone so that they could hear. Therefore, online participants’ perceptions were not only deficit, but also their autonomy was disrupted by the Zoom mediation. However, some participants used their cameras as a creative opportunity. For example, they travelled through space while moving or used the Zoom screen as a frame to decide what to show and what not. Therefore, even though their autonomy was interrupted at a perceptual level, they could compensate for it from a different perspective. Moreover, the interruptions did not prevent their creativity.

4.1.5. Shared Perceptual Field

So far, I mainly talked about how online and studio participants' individual experiences differ in perceptual level. Yet, it is essential to mention that perception is not a private experience but occurs and operates through practical actions within the interpersonal realm (Due 2021).

‘In the studio, when you don’t understand the task or even if it does not make any sense at that moment, we still do that. Because there is a group, we just
imitate the others or just do...It still works, by the way, but it is more... sub-information; I call it social stress or collective unconsciousness’

As the online participant expresses here, we still move with the group in the dance or movement classes when we get lost. However, in the hybrid setting the reason online participant expressed that they couldn’t follow or they easily felt lost in the class because they couldn’t fully access the perceptual field created by others. What happens here is not simply we copy what others do. The phenomenon of ‘distributed perception’(Due 2021), described by Brain L. Due, provides an interesting perspective on what the participant describes as sub-information, social stress or collective unconsciousness at the perceptual level. For Due, perception may be distributed, practical, and publicly recognisable by other agents(Due 2021). It means that sensory information provided by others’ actions in certain situations creates a perceptual field; within the same situation, we rely on this perceptual field created by others to construct our actions. For instance, a visually impaired person can achieve a walking task with the guidance of other agents’ tactile and verbal descriptions. The guidance’s perception-related actions constitute a distributed perceptual field in which a visually impaired person can act and navigate himself in the space accordingly. (Due 2021) For Due, distributed perception is essential for interpersonal communication and how we create solutions for new, unexpected situations. And for him, we can co-operate on perception-related actions regardless of sharing a similar understanding. As long as there is multisensorial communication related to workable body-object-space relations, our bodies can be positioned for perception.(Due, 2021:153) The concept of distributed perception widens our understanding of ‘optimal grip’ (Merleau-Ponty 2013) towards a more intersubjective interaction level.

We can think of partner-works or group works in the movement or dance classes in terms of distributed perception. We may make our movement choices according to the perceptual field constructed by others’ actions. From this point, if we think about partner works in a hybrid format class, each mode of partner work (online-online,
studio-online, studio-studio) would create the different perceptual field. All sensorial modalities (seeing, hearing, smell, tactile, etc.) are available for partners in the studio. It means that partners can create a richer perceptual field together in which they execute perception-related actions. However, only audio-visual sensory information individuals provide are available for partners in online encounters. Thus, distributed perceptual field constructed by partners is limited to audio-visual modalities in online interactions. Therefore, it impacts how partners move and react to each other during the partner-work. And overall, it affected their movement choices and the way they produced them.

**Discussion: Access to the Resources**

If we think that teacher (and teaching) is the resource of learning, it will be easy to assume that online participants will miss some part of the content since they have less access to the teacher than people in the studio. Moreover, the information they get is limited depending on the quality of the online channel. However, Wenger challenges the idea of taking the teacher as a main source of the learning process. In his book *Community of the Practice*, he indicates that teaching is only one of the many structuring resources of learning. It is because he considers learning as an emergent, ongoing process (Wenger, 1998, p. 267), as also Lave indicates (Lave 1991). Then ‘instructions do not cause learning, but it creates a context in which learning takes place, as do other contexts’ (Wenger, 1998, p. 266). It also means that what is taught and learnt may not match all the time and what is learnt may differ from the pedagogical intention. For instance, one online participant who is a professional dancer with a high level of technique said that she gained some surprising insights even though she had hard times in online classes. As a professional dancer, she expressed that through online classes, she had a view of a dance class from the outside and for the first time, she realized how many times she moved subconsciously in the studio and just followed the others. But on the Zoom, she indicated that she was more conscious and more aware about if she really felt moving in that moment with the task or not. Clearly, the
awareness or consciousness that she gained is not intended directly in the LBMS’s pedagogy, but it emerged in that specific situation as a result of all the components of the learning context such as computer, the quality of internet connection, chosen activities, verbal instructions, the position of her, space etc.

Also, Maturana and Varela’s approach to communication from a biological perspective expands our understanding of ‘access to resources’ in a learning context. In their book, *The Tree of Knowledge*, they indicate that there is no ‘transmitted information’ in communication biologically. Each time communication occurs, there is behavioural coordination in a realm of structural coupling (Maturana and Varela, 1992, p.196). It means that ‘the phenomenon of communication depends not on what is transmitted but on what happens to the person who receives it. (Maturana and Varela, 1992, p.196). If we deploy this understanding into the LBMS training setting, we need to revisit our assumption about the main issue of receiving information from the teacher in the studio and online. It means that the distinction among content (or information), the transmission process and our situation at that specific moment become blurred. In other words, there is no independent content from our own experience. That expands our focus from the issue of access to resources to the situations of participants when learning experiences occur. From Maturana and Varela’s perspective, the realm of structural coupling for online and physical people is different. In other words, what happens to online and studio people is not the same. As a result, learning experience or what is gained varies based on our ‘sensory-motor coupling’, which points out the perception-action unity that I mentioned in previous chapters.

John Stewart et al. (Stewart et al. 2014) explain sensory-motor coupling as the basis of our sense-making process, as in the diagrams in Figure 6 and Figure 7. Those diagrams show how we, as autonomous agent, make sense (or in another word how meaning emerges interrelation with) in our environment through our actions.
In Figure 7 (Stewart et al. 2014:3), technical artefacts represented by the rectangle can be understood as any sort of tools, from the first human flint stones to the latest technologies, including software. In fact, it is almost impossible to think of human being regardless of mediation in interaction, as represented in Figure 6 (Stewart, Gapenne and Paolo, 2014, p. 3). As Gallagher & Zahavi indicates, from a phenomenological perspective, our interaction with the world is mediated in some ways but not only by tools also by intersubjective realm such as history, language, others’ bodies etc. (Gallagher and Zahavi 2008). I will discuss intersubjective aspect in the following chapter so that I will stay more in the material mediation now. For the hybrid format situation, not only technological devices like microphones, beamer, and music player but also clothes, socks, notebooks, pencils etc., enter our sensorimotor coupling process. Here it is also essential to mention two separate modes of interaction with tools that Stewart et. al. defined. While the first mode describes when the tools are being used (in-hand mode), the other mode refers to when they are dissociated from the body (put-down mode). During the in-hand mode our attention is not on the tool but in the world, so it fades from our consciousness. On the contrary, in put-down mode, the tool itself has the focus of attention. (Stewart, Gapenne and Paolo, 2014, p.18–19) The reason of online participants’ discomfort lies on those two modes. While physical participants most of the time dealt with the tools (clothes, technical devices, etc.) in-hand mode in which they did not even have to think about them, online
participant couldn’t switch from put-down mode to in-hand mode. Technological tools, such as camera, microphone, speaker, and even Zoom software were continuously part of their perceptual coupling process. Zoom’s unstable technical quality and its limitation to capture and mediate the complex dimensions of movements made it difficult to disappear from online participants’ attention. Since our sensorimotor coupling mediated by tools constitutes our experience of the world (Stewart, Gapenne and Paolo, 2014,p.19), online and studio participants’ experiences in training differed. And as I mentioned earlier, the distinction between online and studio experience does not develop out of ‘access the learning resources’ but stems from the difference of their perceptual experience.

4.2. Struggles Caused by Remote Intercorporeality in Hybrid Format Class

What I discussed so far demonstrates that the clash between online and physical classes is more complicated than only the problem of access to resources. It is because our sense-making process is based on our sensory-motor coupling and is situated within its environment which are not only determined by physical properties but also created by others’ actions. It is true that one aspect of online participants’ discomfort derives from the mediation of Zoom, however, some teachers indicated that if all participants were online, that would be much easier for them. One of the teachers expressed that as follows:

‘I teach online workshop or weekly classes. But I know the people before, so it is so much easier. The flow is much easier when you are just online. This mixture or hybrid is hard. Having people here in the studio and there… trying to integrate everyone into partner work… this is really a challenge…’

As I mentioned in the previous chapter, if we take participants as autonomous agents who can actively and freely generate actions according to the current situation, then the interaction process between agents becomes essential to understand our sense-making process. So, in this chapter, I discuss how remote intercorporeality creates different modes of interaction dynamics and how that affect our sense-making process.
4.2.1. Different Modes of Interaction

When I reflect on the moments that participants and teachers got frustrated, I realise that their frustrations stem not only from technical issues but also from the difficulties of interaction in partner work. After I analysed the instructions given in the classes, it became clearer why participants had challenges engaging in the exercises. Here are some examples:

‘-get the flow of your partner…’
‘-try to connect through breath…’
‘-be aware what kind of connections are getting developed…’
‘-what kind of atmosphere are you sharing with your partner…’

Those instructions are designed for our physical realities and address studio conditions. When hearing and seeing are the only senses to get involved with others on online condition, how to get flow of the partner or to feel her breath or share the atmosphere. Here is the other example given in the class while participants were working on their inner-outer connection:
‘…don’t use that much of your eyes to reach the other person but use your skin! Skin is everywhere all around you! How can you share the space and feel the other person through the skin, through the space?’

Those kinds of instructions are the core of the training and are supposed to be challenging. They are supposed to challenge how participants move and interact with each other through movement. Those instructions aim to lead participants’ attention towards a specific point (such as body parts, effort, muscle, spatial target etc.) to reflect their movement experience. However, in the hybrid setting, they challenged online and studio participants in different ways and that raised some questions: ‘How can you interact with someone through your skin or space if you don’t share the same space?’ or ‘how to react those kinds of instructions when they doesn’t meet your reality?’ I will explore those questions make me question different modes of interactions in training.

During the training, participants worked as pairs in three modes: online-online, studio-studio and studio-online. I analysed partner work videos to identify specificities in each mode. I used Laban’s basic movement categories in a broader sense to understand which aspects stand out for each couple.

4.2.1.1. Studio-Studio Interaction

It is hard to detect common characteristics of improvised partner works in the studio because the dynamics of the interactions vary each time depending on the couples, even though the same participants came together as a partner. Yet, some features come forefront in comparison with other modes of interaction. For instance, the use of space was different than other modes. Although couples did not travel through space freely because of the Corona restrictions, they changed directions, levels, and planes more frequently while moving in their kinesphere and around their partners’ kinesphere. And they were more attentive to moving towards the space created by their partners’
movements. Basically, while moving, they have shaped the space together three dimensionally.

Another important point caught my attention was how they substituted one sense with another. During the partner-work, one couple was improvising on the floor. Their tiptoes were touching while they were moving, and they kept this connection until the end. Whenever they lost tiptoes' connection point, they looked at each other (Photo 5).

![Photo 3: Duo dance in the studio: One of the moments that they lost the touch and one partner looks at the other one.](image)

They substitute touch with a glance to keep the connection. Switching from touch to gaze to keep interaction probably happened without consciously reflecting on it, which corresponds to ‘optimal grip’ (Merleau-Ponty, 2002; Dreyfus, 1996). It is also interesting to think about the incident in terms of the ‘distributed perceptual field’ (Due, 2021) that I mentioned in the previous chapter. Touch is one of the unique simultaneous reciprocal senses. When one participant changed the position of her leg, touch became unavailable; they lost the connection. When they lost touch, the other partner's first movement was lifting the head to see and find the touch connection again. So, the perceptual field also impacts how dancers act and react ‘in’ and ‘to’ the certain
situations. In other words, as partners were moving, they were creating a perceptual field through their actions. They were moving or reacting within this multi-sensorial field to keep the interaction going, which was their main intention. As I indicated earlier, Due’s distributed perceptual field (Due, 2021) provide a perspective on how we navigate ourselves throughout perception-related actions in the interpersonal sphere, which creates a perceptual field by others’ action. This perceptual field might be one of the factors that underlie our movement choice in the interaction process.

4.2.1.2. **Online-Online Interaction**

When I started to analyse online partner work from the videos, I realised that I could not use the same parameters as in the studio couple because online participants’ relationship with the camera was at stake in their interaction. The camera’s position in the space impacted how participants placed and moved their bodies and what was visible to their partners. Therefore, the spatial orientation of the camera affected how they interacted with their partners. Besides that, some participants used the Zoom frame’s limitation as creative opportunities. They played with the camera and chose different body parts to show as they moved; sometimes, only hands, heads or feet were visible. Usually, cameras were stationary and online participants were moving in front of it. However, some participants started moving their computers after a few partner sessions. They travelled through space; they changed the level and did some turns with the camera. Thus, there were moments when technological devices became opportunities for discovery beyond being communicative tools.
Yet, all online participants’ gazes were usually on the camera. That does not only affect their bodily positions but also have an impact on their Effort level. Here, I use Effort in Laban terms. So, it refers to energy level and outer expression of inner drives that can manifest in movement in relation to Wight, Time, Space and Flow. According to that, trying to look at the camera gives direct spatial intention to online participants’ movements. When I analysed the same exercise for online-online and studio-studio couples, I realised that their Effort level differed because of the spatial intention. While online people were moving in the Awake State, which emerges from the combination of Space and Time Efforts, studio people were dancing in Dream State (Weight and Flow Effort) or Remote State (Space and Flow Effort). This is to say that studio people were moving with more Flow effort than online people. It is an interesting outcome because in LBMS system  Flow is a motion factor which establishes relationships and communication. (Laban and Ullmann 1988:76) Laban describes the measurable aspect of the Flow as control and the classifiable element of it, which is about movement sensation as fluency. (Laban and Ullmann 1988:77) It means that participants in the studio moved in a way that they had more control and fluency in their movement during the improvisation.

Online and studio participants’ different Effort levels also came forward during the feedback sessions. In one of the classes in which the theme was ‘Relationship,’ the
teacher led participants’ attention to how they relate to others and objects around them. The feedback session in sharing circle unfolded the participants’ experience. All online participants indicated that they interacted with their partners through eye contact so facing the camera was the primary position and cue to maintain the relationship with their partners. Some of them also indicated that they had to move less to maintain eye contact. Those comments revolve around vision and bodily position for getting into interaction. However, the studio participants' feedback highlights the Effort level when they interact with their partner. One participant in the studio expressed his experience as follows:

‘For me, the very high intensity of relationship, has been a kind of attunement which is definitely something to do with decision my body made, a kind of attunement with the other person…It has something to do with the temperament and the rhythm… especially temperament. Someone is using very gradual or using high intensity, low intensity, slow or fast… And this is something that my body attuned to… And it starts first with look, I guess’

Another participant from studio described his experience for the same exercise, referring to that comment:

‘I was going to describe my key relationship moment as mirroring, but I think the attunement is such a good word for that moment… For me, it starts even before eye contact. As soon as other person is in my view my body starts picking up something subconsciously. What eye contact adds is answering the question: Is there communication at this point? I am attuned to you now, are you also attuned to me? Is there a conversation here?’

Those intensity, temperament and rhythm qualities, what participants described as subconscious or bodily decisions, fall into Laban’s Effort qualities. What is striking
here is that those felt qualities that made participants attuned to each other have emerged only for studio participants intercorporeally in physically shared spaces. So, during the training, Zoom mediation was insufficient to transfer this level of information, such as intensity or temperament to the remote spaces. Therefore, when online participants improvised together, they could not engage each other’s presence in energy level (Effort level in Laban terms). Thus, they could only keep their interaction through eye contact and their bodily positions.

Moreover, all the feedbacks from both online and studio participants underline the importance of reciprocity and simultaneity in the interaction process, whether remote or in the studio. But especially for online people losing this mutual interaction did happen more often, and they indicated many times that they felt lonely. The inference about the need for mutuality in the interaction process is coherent with some old but still valid experiments conducted in developmental psychology. According to Murray and Trevarthen, babies can sense if they interact with their mothers’ live or recorded footage. When they can not have ongoing engagement with mothers in recorded video, they become upset. (Murray and Trevarthen 1985 cited in De Jaegher and Di Paolo, 2007) De Jaegher and Di Paolo interpret babies’ reactions as the importance of mutual continuity of interaction and the affective dimension of our interaction process. In hybrid case, this interpretation also constitutes one aspect of the emerged feelings of online participants.

4.2.1.3. Studio-Online Interaction

Analyses of studio and online participants’ partner work brought about discussions on ‘peripheral vision’, ‘intention’ and ‘multifocality of the attention’ in interaction process. Online partner indicated that in studio condition, she usually could use her partner in the peripheral vision to keep the contact and to understand what the partner is doing, even though she doesn’t look at her partner directly. However, she said that it works differently on Zoom. It is probably because the Zoom frame on the screen
functions like a window where she can see her partner or her partner becomes visible to her. Even though she keeps the window (Zoom frame) in her peripheral vision as moving, it does not guarantee that she will be able to see her partner. Because this is the partners’ decision to be in the frame or not. So, here, the importance of the ‘mutual intention’ to connect is at stake. The same online participant expressed that as follows:

‘we had to make effort, invitation must be very clear for us to notice that the other person looking for a contact. Otherwise here we are alone, no engagement you have to be clear in your intention, it must be overly stated’.

Also her partner in the studio agreed with her:

‘you really have to want to be connected, you have to put effort’.

From Merleau-Ponty’s perspective, intentionality is not an intellectual concept and does not always work in a conscious level but it is a bodily motor skill which works unconsciously and spontaneously to engage to our environment (Merleau-Ponty 2013). From enactive perspective, intentionality is also an essential part of the sense-making process. First of all, it is because it constitutes the idea of the autonomous agency who freely choose to regulate her actions in the world based on her needs or situation (Paolo, Buhrmann and Barandiaran, 2017:212). Secondly the intention of agency’s action enters the intersubjective realm since it is readable for others. Not only phenomenological level but also from a more neural perspective, mirror neurons related researches made it clear that our sensory-motor systems can sense the intentions of other’s actions even before the action is completed. (Keysers 2011; Rizzolatti and Sinigaglia 2007). Therefore in the interaction process, coordination between intentional and embodied agents (Fuchs and De Jaegher, 2009: 467) makes mutual engagement possible. In training, the studio-online couple struggled with their partner work because they struggled to sense each other’s intention.

Moreover, like online-online couples, studio-online couples also considered eye contact as the primary way to interact. Keeping eye contact required extra
awareness, especially from the studio participant. It is because we usually do not consider whether we are visible for our partner in the studio. But now, while dancing, she needed to be extra effortful both to be seen by her partner and to see her partner. It was challenging because while her partner’s image was reflected on the wall, the camera was positioned below that image. (See Photo:10) Therefore, she struggled to deal with both. Once, she held the camera and tried to dance with it but the amplitude of her movement decreased and she immediately put the camera back. She expressed her experience as follows:

‘I actually had a trio because I was looking at the camara on the peripheral area (hand gesture) and at the same time I was trying to find her. Ooh! Here she is and trying to see her face. So, like my partner said you really have to want it and it was like, go for it. You don’t get it for granted.’

Photo 5: Studio-online participants’ duo in ‘Relationship’ Class

So here, the studio participant had two visual focus that she had to tackle to keep the interaction with the online participant. Studio participants’ bodily consciousness has been challenged. It is because while dancing in the studio, we do not need to put extra effort to be visible to our partners. Also, when we change our bodily position or move our head to see our partner, the moment we have eye contact is mutual. However, even though we face each other in online partnering, it doesn’t always mean we have mutual eye contact. One of the partners might be out of the frame, or we might be actually
looking at somewhere else. So online dance with a partner is more complicated than bodily encounters because it requires *multifocality* and *extra awareness*. Thus, in this incident, Zoom and technological devices become more than a mediation because there is no information can be transmitted. The information is revealed through the use of technology. Participants’ awareness about their bodily positions, attention level, direction of their intention in the interaction process were revealed while dancing *through* and *with* technological devices.

How studio partner were interacting with camera was also striking in terms of Gibson’s ‘affordance theory’ (Gibson 2014). As I explained earlier, for him substance, surface and medium of the environment determine what the world offers to us. More specifically physical characteristics of the object such as shape, size, quality of the surface etc. are affordances of the object that offer us what to do with that object (Gibson, 2014:119). It manifests object’s functionality that imply interaction possibilities with the object. More importantly affordances imply possibilities for action. This is to say, for him, ‘the “values” and “meanings” of things in the environment can be directly perceived.’(Gibson, 2014:119) If we think digital technologies and platforms, the term affordances expands beyond material qualities. For instance, as Norman indicates, when we see arrow shaped cursor in digital realm, we immediately know that it means we can click and navigate between pages. It is beyond the subjective meaning and value of the arrow.(Norman 2014) So, the term affordances does not employ only perception of physical objects but also signs, digital images and other immaterial artifacts. As Gibson indicates ‘an affordance cannot be measured as we measure in physics’; it has to be understood in relevance to human, so it is relational.(Gibson, 2014:120) If we go back to studio-online interaction in the class, we can look at the relationship between studio participant and camera relationship in terms of affordance. The camera used by the participant during the interaction was a portable webcam. Most of the time, it was directed by the assistant in the classes. In the studio-online partner work that I analysed, the camera was on the
tripod and stable on the floor at the beginning. However, once studio-online couple started to work as a duo, it wasn’t easy for studio participant because of the level and the position of the camera. Thus, to make it easier, the studio participant took off the camera from tripod and held it while dancing. Here, physical features such as shape, weight, size of the camera afford the mobility. But it affordances worked until certain proximity because of the length of the cable. The affordances of the camera is regulated by not only qualities of the object but also abilities of the user in interaction (Norman, 2014:11). When she started to dance holding the camera, her movements got smaller since she had to deal with cable, screen, her own movement. When she put the camera down, the amplitude of her movement become wider again. What we see here is that the way she interacts with the camera was limited with affordances of the camera. Yet, she still was able to find solutions according to those affordances. Besides that, the devices' affordance determined and restricted how she moves, what she sees, and what she hears. So to speak, affordances of the camera-shaped her perception.

Despite the challenges, it is still possible to dance and feel connected remotely, as studio participant expressed:

‘...And yet, we can dance together even if we don’t see each other, we can still be very close and we can have close relationship. Yes, it is different dancing on the screen and dancing here, but still possible…’

Gibson explains this ability to continue perceive things even though they are out of our sight as the ‘awareness of the persistence of the environment’. (Gibson, 2014:197) For him, sensorial information other than visual such as touch, sound, and light, may impact perceiving persistence. (Gibson, 2014:198) Even though studio-online or online-online couples lost the continuation of visual information during partner work, they can still feel connected with the awareness of the other person's existence. As I explained earlier, the more interaction gets ‘reciprocal’ and ‘simultaneous’, the more they feel connected.
4.2.2. Fine-Tuning Beyond the Gross Motor Movement In Hybrid Format

In the second week of the training, all participants were on the floor, working on the arm circles in Bartenieff Fundamentals with the teacher's verbal instructions. One of the studio participants said that the more her arm went up, the heavier they became and she asked the teacher whether this was normal or the feeling of weight should have stayed the same. The teacher commented that she needs to check first before she answers. The teacher lay down, did the movement a few times, and said, ‘Ohh! I see what you mean, now!’ After she gave some correctional tips about the position of the shoulder blades, she explained the participant’s question as she was doing the movement:

‘only my shoulder blade and hand are on the floor, rest is not really. So yes, it may feel like heavy, but it is actually more suspended. I do not let my arm totally relax. There is a sense of suspension than being heavy, in fact.’

Here, the teacher did not give the ready-made answer. She needed to go into her own body and search the answer in her own movement. What is transmitted here is not declarative knowledge and readymade information but embodied knowledge which needs to be discovered by individuals. After more than twenty-five years of experience in LBMS, even the teacher needs to do the movement to help the student. The question asked by the students came from her movement execution and is quite refined. It is about the felt qualities of the movement and differentiates the sense of heaviness and sense of suspension. This instance is a good example of how training works on fine-tuning level. By definition fine-tuning is ‘to adjust precisely to bring to the highest level of performance or effectiveness’ or ‘to improve through minor alteration or revision’ (Merriam Dictionary, 2022). Fine-tuning is the core of the training because LBMS is not about exact precision in execution of the movement or learning any movement technique. Exercises are quite easy to achieve but what is expected from participants is to realise felt qualities such as images, tensions, emotions, muscle tones during the execution and to realise the connection between expressivity and
functionality of the body. In that way participant can find most efficient way to move. Therefore, teachers’ observation and feedbacks are important sources for the participants to improve their movement skills. However, during hybrid format, teachers were struggling to reach fine-tuning level of the online participant. Here are some examples of the teacher’s comments for participants during the same arm circle class:

<table>
<thead>
<tr>
<th>Feedbacks for Studio Participants</th>
<th>Feedbacks for Online Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>− Your little finger has to be more active…</td>
<td>− You are little bit too fast…</td>
</tr>
<tr>
<td>− You need little bit of tone because you are very relaxed…</td>
<td>− Close your arms more. Your fingertips should be more or less in the middle of your upper arm…</td>
</tr>
<tr>
<td>− You should do the opposite, use less tone because you have fairly high tone in your arms…</td>
<td>− Do not repeat that much, rest in between…</td>
</tr>
</tbody>
</table>

Table 1: Feedbacks for Studio and Remote Participants

If we carefully look at those words, we can realise that teacher’s feedback differs for online and studio participants. While the teacher comments on muscle tones and activation of body parts (related to contraction level) in the studio, she gives feedback about tempo, bodily position and numbers of repetitions for online participants. She could reach muscles tones and intensity of the contraction in the studio but her observations were about bodily positions and more on the quantitative level for online participants. The same teacher latter on mentioned in the interview how hard to work on fine-tuning of the online participants:

‘I think, you can get the gross-motor pattern fairly well on online, it is the fine tuning that really difficult to get online… Because, for the gross motor everybody could lift their leg, come on! The question is how. This is the fine-tuning of it. It depends on several things internet stability, the camera, how good the person behind the camera is following you, how close or far away
you are, how much you can tell the person to change their perspective so you can see them better….so many variables… three dimensionality of course obviously affects… but also interaction possibilities… and hands on of course… and other just little tiny things… if I am next to her that I can just say ‘look at this, do that and boom!’

The teacher well elucidated why she struggled to work on fine details of the movement with online participants. She articulated the technical and practical problems of Zoom mediation, absence of touch, decreased interaction possibilities and immediacy. Those inferences are coherent with what I have discussed in previous chapters. Once more, teachers have been challenged to access all the movement dynamics created by participants because they were not in the same space where movement was created. We can think about those interaction dynamics as a wide range of spectrum from experiential level to pre-reflective level. In other words, some aspects of the movements can be observable and enunciable easily such as direction, positions, and amplitude; some others can still observable and possible to sense but hard to articulate such as intensity, force or energy; some other aspects are embedded deep down to our cognitive abilities like language, imagination, thought or feelings and hard to reveal.

As Meyer and Wedelstaedt summarise,

> ‘our fine-tuned interactional abilities are the product of both “muscle memory” (Noland 2009) or “inter-body memory” (Froese & Fuchs 2012), and experiences of interactional “muscular bonding” (McNeill 1995) or “inter-bodily resonance” (Froese & Fuchs 2012) within one “space of muscular sensation” (Wittgenstein 1975, p. 102)’ (Wedelstaedt and Meyer 2017)

So to speak, what makes it possible to work on participants’ fine-tuning is what teachers see but what they sense and what emerges in the interaction process. Therefore it wasn’t easy to work on reaching the fine-tunning level which are more about felt qualities in hybrid format setting with existing telematics technology.
Discussion: Remote Intercorporeality and Shared Sense-making in Hybrid Format

As I tried to demonstrate in previous chapters, online and studio participants' engagement levels were distinct in different levels. In the feedback session, while feeling ‘lonely’, ‘detached’, and ‘outsider’ was so often expressed by online participants, for people in the studio those emotions did not occur. Yet, feeling distracted occurred for all participants because their attention level was affected. In each interaction in remote intercorperality, each item for technological mediation (camera, screen, cables etc.) impacted participants’ attention span and direction of their attention. Besides that, online mediated couples had problems anticipating their partner’s intention. They indicated that intention needs to be ‘overly stated’ and ‘clear’ when they got together online. From a studio perspective, it was not easy to understand whether online participants could follow the class or not unless they articulated it verbally. Likewise, remotely, it was hard to anticipate what kind of bounds they created between each other. I argue that emerging dissimilarities in attention, intention, emotional level and differences in interaction dynamics impact the co-creation of common meaning among participants in hybrid format.

Enactivist theorists understand intersubjectivity as a sense-making process which emerges from the sensory-motor system and environment coupling. (De Jaegher and Di Paolo 2007; Durt et al. 2017; Fuchs and De Jaegher 2009). They take ‘mutual interaction’ as a ‘coordination between intentional and embodied agents'(Fuchs and De Jaegher, 2009:467) as the key component to construct a shared world. De Jaegher and Di Paolo uses the term ‘participatory sense-making’ which they explain as:

‘the coordination of intentional activity in interaction, whereby individual sense-making processes are affected and new domains of social sense-making can be generated that were not available to each individual on her own’(De Jaegher and Di Paolo, 2007:497).
Here, the main idea is that during the encounter of those bodies in coordinated activities, affective qualities emerge in interpersonal sphere. For Fuchs and Froese, this sphere is continuous ‘interaffective space’ which consist emotional and affective states of participants and they can perceivable directly by others. (Froese and Fuchs 2012 cited in Durt et al., 2017) In LBMS training interaffective space becomes even more important since the training operates in fine-tuning level which only can be worked on felt movement qualities such as intensity, muscle tone or energy level. However in hybrid setting teachers had hard time to reach those qualities of participants movement.

I want to open a small bracket to mention a few theories to discuss how we can ‘sense’ other’s emotional and affective states intercorporeally. One of the theories is Daniel Stern’s ‘attunement theory’ which is also embraced by enactive theories. In his book ‘The Interpersonal World of the Infant’, he indicates that infants can attune with some features of their mother’s behaviour before developing high-level cognitive structures like language, or even before imitation and mimicry. These specific features of behaviours are ‘intensity’ (the level of intensity and changes), ‘timing’ (temporal beat, duration and rhythm) and ‘shape’ (spatial future of behaviour). (Stern, 2019:146) He adds that mostly infant and mothers’ behaviour matched across sensory modalities. For instance, vocal expressions attune in gestures or facial expressions. In other words, attunement occurs cross-modal (Stern, 2019:148). The ability of affective attunement is not limited to infancy also carried through adulthood. Another explanation for intracorporeal interaction is phenomenologist Sheets-Johnstone’s theory which is based on dynamics of movement. For her, ‘inherent tensional, linear, areal, and protectional qualities of movement’ are foundations of tuning with others in any kind of interaction from everyday situation to dance or theatre events. For her, those qualities give spatial, temporal and energetic information, becoming perceptual data for us. Basically, we can pre-reflectively perceive the intensity, direction and range of others’ movement, which constitutes the base of bodily concert with others (Sheets-Johnstone, 2016: 96–97). In the literature there are also studies which focus on
specifically rhythmical spatial and temporal dynamics of coordination. The rhythmical coordination between two independent systems is conceptualised as *entrainment* (Clayton, 2012; Waterhouse, Watts and Bläsing, 2014). From a more neural perspective, since the 90s the research on mirror neurons has highlighted that we can relate to others’ emotions and affective states; and anticipate their actions by mapping them in our own neural system. In the process of mapping, we actually recall our own bodily information, therefore, we link our bodily experience to the others. This interpersonal bond rooted mirror neurons is taken the neurophysiological base structure of the socialisation process. (Gallese 2009; Keysers 2011; Rizzolatti and Sinigaglia 2007) Lately, studies on mirror neurons’ roles during remote communication have increased. In one of those studies, it is indicated that ‘spatial discontinuity’ and ‘temporal asynchrony’ between interlocutors impact social interaction (Dickerson, Gerhardstein, and Moser 2017) Also, studies focus on how video-mediated communication systems interfere with interpersonal interaction has accelerated. The outcomes of those studies are coherent that the delay in transmission is related to participants feeling of co-presence and interrupting the turn-taking system in the communication process. (Ruhleder & Jordan, 2001 cited in Due and Licoppe, 2020). All those theories from different disciplines point out the primacy of movement dynamics (Sheets-Johnstone 2011), as Sheets-Johnstone would say, and they strengthen the idea of bodily roots of the intersubjective sphere and meaning emerged in that realm. Taking this as the departure point, Fuchs and Froese’s ‘interaffective space’ created by ‘mutual co-operation’ (Fuchs and De Jaegher 2009) needs to be understood at the experiential but also pre-reflexive level.
From here, I will argue that during the hybrid format training creating ‘mutual intention’ emerged as an issue because participants had a problem to sense the intention of their partners’ movement since they had limited access to partners’ movement dynamics. Besides that, online and studio participants created distinct interaction dynamics because of the diverse affordances of their environment. Therefore, different ‘virtual fields’ (Paolo et al. 2017) have emerged for online and studio condition that brought up dissimilar capacities and tendencies. In interaction process, the problem in reading others’ intentions and digital interruptions of coordination dynamics take part. As a result, studio participants and online participants’ sense-making process differed.

5. Conclusion
During intensive hybrid movement training, reduced collaborative work, lack of tactile interaction, and increased verbalisation, which were caused by limited affordances of the telematic system (Zoom) and other technical infrastructure, intervened and shaped studio and remote participants’ experiences differently. Moreover, participants’ dissimilar spatial contexts in remote places generated diverse perceptual fields. As a result, participants’ physical and digital presence created challenges, which some participants described as clashes. In the article, I took participants and teachers’
experience as central, I tried to understand why they described as hybrid format movement training as a clash. I built my arguments around those three main questions:

**How does remote participation through telematics challenge participants’ sensorial experience?** Throughout the article, I try to unfold how and why studio and online participants’ experiences differ. During the training, online participants’ perceptual experiences were challenged most. Even though their sensory organs and motor abilities were working perfectly fine, they still felt disrupted because they could not access the rich multi-sensorial cues that emerged in the studio. They were exposed only audio-visual representation of that vivid information generated out there. I posited that the affordances of Zoom and other devices that make online mediation possible impacted what and how they perceived; therefore, their perceptual grip of the world and their autonomy were disturbed. In this sense affordances of Zoom made it ‘cold medium’ (McLuhan 1994) because it demanded so much contribution from participants. Online participants needed to use their ‘re-presentational consciousness’ (Husserl 2005) more than studio participants to apprehend the things which are not present for them in person in their surroundings. Verbalisation emerged as a main strategy to compensate limited access of bodily sensorial stimuli. Teachers had to be more descriptive to transfer the information and online participants had to articulate their experience verbally to keep their engagement with the studio. So there was a shift in the domination of sensory modalities.

**What can and cannot be transmitted through online mediation?** Some aspects of movement experience and embodied knowledge could not have been conveyed remotely via Zoom. In phenomenological level, some of the movement qualities like energy, intensity, force etc., (it corresponds to the Effort category in Laban terms) and some movement factors that determine our bodily state like muscle tone, contraction, extension etc. in more pre-reflective level were hard to access through Zoom mediation. That is why teachers expressed that it was difficult to work on fine-tuning level with the online participant. However, teachers created several strategies to
overcome the lack of sensorial information and unaccessible features of participants’ bodily states. Working in ‘as if’ mode (pretending to be touching remotely), more descriptive and detailed verbal instructions, transfer partner works to individual exercises were the main strategies that teachers came up with. Moreover, those movement qualities which couldn’t transmitted easily had impact on reading online participants’ mood and shaped interaction dynamics.

*How does remote interaction through a telematic system (Zoom) affect the shared sense-making process in the hybrid format setting?* Although remote participation via Zoom looks like a biggest challenge at first glance, in fact, bringing physical and online participation together was the primary issue during training. It is because the studio mode and online mode generated different ways of interactions and, therefore, different dynamics of interactions. (Table 1)

<table>
<thead>
<tr>
<th><strong>CO-LOCATED PARTNER WORK</strong></th>
<th><strong>ZOOM MEDIATED PARTNER WORK</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Studio-Studio Mode of Interaction</strong></td>
<td><strong>Studio-Online Mode of Interaction</strong></td>
</tr>
<tr>
<td>• More Flow motion factor in interaction which means more control and fluency in movement.</td>
<td>• More spatial intent (towards to camera and the screen) in motion.</td>
</tr>
<tr>
<td>• Interacting with partner through Effort qualities of partners’ movement such as intensity, rhythm, flow.</td>
<td>Interacting with partner through bodily positions. Maintaining connection through eye contact and facing.</td>
</tr>
<tr>
<td>• In feedback sessions, attention to felt qualities and self-reflection on Effort level.</td>
<td>• In feedback sessions, attention to the media (camera, zoom screen, quality of internet); self-reflection on how they ‘receive’ the information.</td>
</tr>
<tr>
<td>• Diverse movement choices, use of space in various levels (high, mid, low), planes and directions.</td>
<td>• Two-dimensional movement choices, more use of body parts.</td>
</tr>
<tr>
<td>• Switching between modalities in interaction process.</td>
<td>• Struggles to read partner’s intention</td>
</tr>
<tr>
<td>• Moving towards space created by partner’s movement.</td>
<td>• Hardship of being multifocal</td>
</tr>
<tr>
<td>• The importance of recipcorality and simultaneity in feeling connected!</td>
<td>• Losing peripheral vision in movement</td>
</tr>
<tr>
<td></td>
<td>• Division in awareness to see and to be seen</td>
</tr>
</tbody>
</table>

*Table 2: Table for Different Modes of Interactions in Co-located and Zoom Mediated Partner-Work*
In another word, how participants interacted with each other, and the dynamics of their interactions were different on Zoom and in the studio because emerged perceptual fields based on various multi-sensorial cues were not the same. Therefore, two shared contextual spheres appeared in the hybrid class: online and studio. Moreover, mixed participation forced both student and teacher to be multifocal. That affected attention level and disrupted to anticipate the intent of the others. As a result, creating mutual intention and attention appeared as a problem in hybrid format class that also impacted on the co-creation of common sense and meaning. For instance, in the sharing circle after each class, while studio participants’ feedback was mainly gathered around bodily discoveries, many times online participants discussed the transmission process, what it worked, and what did not work for them in the class. I find it crucial to underlie the obvious fact that physical participants are considered as created more ‘sense of group’ than online participants in hybrid format because of the intercorporeality in shared space and more interaction possibilities. Online participants always felt they were missing something even though all the precautions were taken, and pedagogy was adjusted into the digital realm.

**Declarations**

**Ethical Approval**

This article is written based on the research conducted within Choreomundus: International Master in Dance Knowledge, Practice and Heritage. Choreomundus is an Erasmus Mundus master programme and offered by a consortium of four universities: Université Clermont Auvergne (UCA), Clermont-Ferrand, France, as the coordinating institution; the Norwegian University of Science and Technology, Trondheim (NTNU); the University of Szeged, Hungary; and the University of Roehampton, United Kingdom. The research is approved as a master thesis by four university, and the ethical guideline of University of Szeged is followed as a responsible institution in the research.
Consent to Participate and Publish

During the fieldwork all participants voluntarily consented to be part of the research. In the article, there are no details on individuals’ sensitive information and images are unidentifiably blurred. The institution and participants were anonymised.

Competing interests

The author declare that they have no competing interests.

Authors’ contributions

Not applicable

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Availability of data and materials

The audio-video materials collected and analysed during the fieldwork are not publicly available due they consist personal information of participants. Yet, they are available from the corresponding author on reasonable request.

References


