

# **Teaching during a pandemic: A cultural-historical activity theory analysis**

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This thesis results entirely from my own work and has not been offered previously for any other degree or diploma.

I confirm that the word length of this thesis does not exceed the permitted maximum.

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## **Abstract**

Situated in a higher education institution in the UAE, this thesis explores the changes educators went through as they started the practice of teaching during a pandemic. Although the practice is bound to change in response to many variables, it is crucial that the initial stages of the practice are investigated and critically analyzed. Such an analysis can facilitate a better understanding of its development and allow researchers and educators in the future to situate this growing practice of teaching during a pandemic. This study aims to provide a localized historical foundation for the practice of teaching during a pandemic from the perspective of higher education teachers.

Based on a critical realist stance, this research utilized Cultural-Historical Activity Theory as a guiding framework. Data for the study were collected at three points: March 2019, March 2020, and May 2020. Having interviewed the participants a year before the pandemic made it possible for the study to historically (and locally) situate participants' instructional practices and allowed for highlighting the unique effects of pandemic-induced tensions and changes. Utilizing Activity Systems Analysis, results discuss the tensions that developed in response to the need to stay safe during the pandemic while, at the same time, meeting the instructional needs of remote teaching and

learning. Many changes happened, and nearly all aspects of the system had to change or develop somehow to sustain the activity of teaching. Results from this study can inform several layers of the community who are interested in higher education, technology-mediated teaching, remote teaching, and the effects of the pandemic on the activity of teaching.

## **Table of Contents**

<b>Abstract .....</b>	<b>ii</b>
<b>Table of Contents .....</b>	<b>iv</b>
<b>Acknowledgements.....</b>	<b>xv</b>
<b>Publications derived from work on the Doctoral Programme.....</b>	<b>xvi</b>
<b>List of abbreviations .....</b>	<b>xvii</b>
<b>List of Tables.....</b>	<b>xviii</b>
<b>List of Figures .....</b>	<b>xix</b>
<b>Chapter 1: Introduction.....</b>	<b>25</b>
<b>1.1 A typical 2020 day .....</b>	<b>25</b>
<b>1.2 Grasping the opportunity .....</b>	<b>27</b>
<b>1.3 Motivations for the study.....</b>	<b>29</b>
1.3.1 Why is the study worth doing? .....	29
1.3.2 What issues does the study want it to clarify, and what practices and policies does the study want it to influence? .....	30
1.3.3 Why do I want to conduct this study, and why should you care about the results?.....	30
<b>1.4 Philosophical underpinnings .....</b>	<b>33</b>

1.4.1 Ontology and epistemology.....	33
1.4.2 Critical Realism.....	34
1.4.3 Critical realism and this study.....	36
<b>1.5 Overview of this study .....</b>	<b>37</b>
<b>1.6 Summary .....</b>	<b>38</b>
<b>Chapter 2: Theoretical framework.....</b>	<b>39</b>
<b>2.1 Theory in research .....</b>	<b>40</b>
<b>2.2 Cultural-Historical Activity Theory (CHAT).....</b>	<b>42</b>
2.2.1 Vygotsky's influence.....	43
2.2.2 Leontiev's theory.....	49
2.2.3 Engeström's contribution.....	52
2.2.4 Completing the picture? .....	56
2.2.4.1 Vygotsky and the environment.....	58
2.2.4.2 Leontiev and the environment.....	61
2.2.4.3 Engeström and the environment .....	63
2.2.4.4 Defining the environment.....	67
2.2.4.4.1 Time.....	68
2.2.4.4.2 Space .....	70

2.2.4.5 Placing the environment .....	74
2.2.4.6 Analyzing the environment .....	78
<b>2.3 CHAT and critical realism.....</b>	<b>79</b>
<b>2.4 Summary .....</b>	<b>82</b>
<b>Chapter 3: Research background .....</b>	<b>83</b>
<b>3.1 Once upon a time .....</b>	<b>84</b>
<b>3.2 The plot thickens .....</b>	<b>85</b>
3.2.1 The UAE.....	86
<b>3.3 Education at the beginning of Covid-19 .....</b>	<b>88</b>
3.3.1 The UAE.....	88
3.3.2 Research site.....	91
3.3.3 The course.....	93
<b>3.4 Problem statement.....</b>	<b>95</b>
<b>3.5 Summary .....</b>	<b>97</b>
<b>Chapter 4: Literature Review .....</b>	<b>98</b>
<b>4.1 Situating the review .....</b>	<b>99</b>
<b>4.2 Hi, my name is.....</b>	<b>100</b>
4.2.1 Emergency remote teaching? .....	101

4.2.2 Teaching during a pandemic.....	102
<b>4.3 Issues and challenges.....</b>	<b>103</b>
4.3.1 Abrupt changes.....	104
4.3.2 Access is not a given.....	106
4.3.3 Stranded out of class.....	107
4.3.4 Digital skills.....	108
4.3.5 Ghost towns.....	109
4.3.6 More than teaching.....	109
4.3.7 More than learning.....	110
4.3.8 The good?.....	111
<b>4.4 Future predictions and recommendations.....</b>	<b>111</b>
4.4.1 Learning loss.....	112
4.4.2 Supporting teachers.....	113
4.4.3 Wellbeing.....	114
4.4.4 Financial cost.....	115
4.4.5 While we wait.....	116
<b>4.5 Is there a gap?.....</b>	<b>117</b>



4.6 Summary .....	121
<b>Chapter 5: Research design.....</b>	<b>122</b>
5.1 Research questions .....	124
5.2 Case study approach.....	124
5.3 Data collection .....	127
5.3.1 Participants .....	129
5.3.2 Instruments .....	131
5.3.3 Ethical considerations .....	136
5.4 Data analysis.....	136
5.5 Theory and research design .....	138
5.6 Quality and trustworthiness.....	141
5.7 Limitations .....	143
5.7.1 Case study .....	143
5.7.2 Data collection timeframe.....	144
5.7.3 Research setting.....	145
5.7.4 Acknowledging the privilege .....	148
5.8 Summary .....	149

<b>Chapter 6: Results</b> .....	<b>150</b>
<b>6.1 Considerations to note</b> .....	<b>150</b>
<b>6.2 Roadmap</b> .....	<b>152</b>
<b>6.3 Environment</b> .....	<b>153</b>
6.3.1 What is the environment? .....	153
6.3.1.1 Time .....	154
6.3.1.2 Space.....	155
6.3.2 How has the environment developed? .....	156
6.3.2.1 Time: Sudden and immediate shift .....	156
6.3.2.2 Time: Early intensive teacher training.....	159
6.3.2.3 Space: The geographical and cultural dimension .....	160
6.3.2.4 Space: The institutional role dimension .....	163
6.3.2.5 Space: The social role dimension.....	164
<b>6.4 Subjects</b> .....	<b>166</b>
6.4.1 Who are the subjects? .....	166
6.4.2 How have the subjects developed? .....	167
6.4.2.1 The pilot shock.....	167
6.4.2.2 Redefining their approach.....	169

6.4.2.3 Trying to cope with the changes .....	173
<b>6.5 Objects .....</b>	<b>176</b>
6.5.1 What are the objects?.....	176
6.5.2 How have the objects developed? .....	179
6.5.2.1 No longer wholly/fully collective? .....	179
6.5.2.2 Changing priorities .....	184
<b>6.6 Artifacts .....</b>	<b>188</b>
6.6.1 What are the artifacts?.....	188
6.6.2 How have the artifacts developed? .....	191
6.6.2.1 A teacher's perspective .....	192
6.6.2.2 A CHAT-based analysis .....	200
6.6.2.3 No longer available artifacts.....	202
6.6.2.4 Newly-introduced or completely-redefined artifacts.....	207
6.6.2.5 Redefined or remained the same .....	208
<b>6.7 Community .....</b>	<b>209</b>
6.7.1 What is the community? .....	209
6.7.2 How has the community developed? .....	210
6.7.2.1 Students.....	210

6.7.2.2 Colleagues.....	215
6.7.2.3 Other community members.....	218
<b>6.8 Division of labor .....</b>	<b>218</b>
6.8.1 What is the division of labor? .....	219
6.8.2 How has the division of labor developed? .....	221
6.8.2.1 Teacher-student.....	221
6.8.2.2 Student-student.....	224
6.8.2.3 Student.....	225
6.8.2.4 Other community members.....	226
<b>6.9 Rules .....</b>	<b>228</b>
6.9.1 What are the rules? .....	228
6.9.2 How have the rules developed?.....	228
<b>6.10 Actions.....</b>	<b>231</b>
6.10.1 What are the actions? .....	231
6.10.2 How have the actions developed?.....	232
<b>6.11 Concluding remarks.....</b>	<b>236</b>
<b>Chapter 7: Discussion .....</b>	<b>241</b>

<b>7.1 Research Question 1.1 What kind of issues have teachers faced as they engaged in TDP? .....</b>	<b>242</b>
7.1.1 Issues that were appreciated.....	246
7.1.1.1 Empowering students .....	246
7.1.1.2 Individualized feedback .....	248
7.1.1.3 Colleagues' support .....	249
7.1.1.4 Prior experience with laptop-mediated classrooms .....	249
7.1.1.5 Timely professional development .....	250
7.1.2 Issues that were redefined .....	250
7.1.2.1 Teacher's role and teaching approach.....	251
7.1.2.2 Engagement, progress and understanding .....	252
7.1.2.3 Effective learning activities.....	254
7.1.2.4 Behavior management.....	255
7.1.3 Issues that caused concern and overwhelm .....	256
7.1.3.1 Students' wellbeing and privacy .....	257
7.1.3.2 Students' ability to learn .....	258
7.1.3.2.1 Class experts are not remote experts.....	261
7.1.3.3 Teacher's support and guidance .....	265
7.1.3.4 Constant and abrupt changes .....	266

7.1.3.5 Remote teaching demands .....	266
7.1.3.6 Communication.....	268
<b>7.2 Research Question 1.2 What kind of strategies have teachers utilized to respond to Covid-driven changes and challenges? .....</b>	<b>269</b>
7.2.1 Take the lead.....	270
7.2.2 Hand over control.....	271
7.2.3 Track, track, and then track.....	272
7.2.4 Let it go.....	273
7.2.5 Go with the flow.....	274
<b>7.3 Contributions to practice: Implications and recommendations.....</b>	<b>275</b>
7.3.1 Use evidence and research to guide our understanding .....	276
7.3.2 Train teachers.....	278
7.3.3 Ensure access for all .....	279
7.3.4 Prepare students .....	280
7.3.5 Create clear and flexible contingency plans.....	281
<b>7.4 Contributions to theory: CHAT and the environment.....</b>	<b>282</b>
<b>7.5 Contributions to research.....</b>	<b>282</b>
7.5.1 Class and remote beginners/experts .....	282

7.5.2 Filling the gap .....	283
<b>7.6 Further research .....</b>	<b>285</b>
<b>References .....</b>	<b>286</b>

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## **Publications derived from work on the Doctoral Programme**

Al-Ali, S. (2020). Activity systems analysis: A maze worth exploring. *Studies in Technology Enhanced Learning*, 1(1), 81-94.

## **List of abbreviations**

AED United Arab Emirates dirham

ASA activity systems analysis

ASM activity system analysis

CBP classes before the pandemic

CDP classes during a pandemic

CHAT Cultural-Historical Activity Theory

DOL division of labor

FP female participant

GBP British pound sterling

LU Lancaster University

MP male participant

PD professional development

RQ research question

TBP teaching before the pandemic

TDP teaching during a pandemic

TEL technology-enhanced learning

## List of Tables

Table 3.1 Number of students who join ABC101 .....	94
Table 6.1 The objects of teaching prior to the pandemic .....	178
Table 6.2 Functions served by e-tools used in CDP .....	198
Table 6.3 Functions served by e-tools used to support TDP .....	199
Table 6.4 Community members participating in the activity .....	210
Table 6.5. New tasks that developed as a response to the new needs of teaching remotely and during a pandemic.....	227

## List of Figures

Figure 1.1 Points of reference used to situate the historical development of TDP in this study .....	32
Figure 2.1 Vygotsky's mediated action triangle.....	49
Figure 2.2 The hierarchical relationship between the activity, actions, and operations.....	51
Figure 2.3 Engeström's suggested activity system model .....	53
Figure 2.4 An example of an activity system model showcasing the activity of doing PhD research.	54
Figure 2.5 The temporal aspects defining the environment of the PhD research activity .....	69
Figure 2.6 The special dimensions that shape the spatial environment.....	70
Figure 2.7 Earlier drafts of the suggested activity system model.....	75
Figure 2.8 An activity system model that accounts for the environment as an active element .....	76
Figure 3.1 WHO tweet declaring Covid-19 is a pandemic.....	84
Figure 3.2 UAE mandated violations to prevent Covid-19 spread (source: Twitter/@admediaoffice); 1 GBP is around 5 AED. ....	86
Figure 3.3 Emergency alerts sent out on a daily basis.....	87
Figure 3.4 A tweet about post-Covid-19 norms by the vice president and prime minister of the UAE (Al Maktoum, 2020) .....	89
Figure 3.5 Important dates in the UAE during the early days of the pandemic .....	90
Figure 3.6 Important dates at the research site during the early days of the pandemic .....	92
Figure 4.1 The search query for the identifying relevant studies.....	99

Figure 4.2 Issues and challenges identified in the surveyed literature .....	104
Figure 4.3 Gaps identified in the literature .....	120
Figure 5.1 The boundaries defining this case study .....	126
Figure 5.2 Data collection timeline.....	129
Figure 5.3 How data were collected .....	130
Figure 5.4 Participants' involvement throughout data collection phases.....	131
Figure 5.5 Mapping interview 1 questions to ASM elements .....	132
Figure 5.6 Mapping interview 4 questions to ASM elements .....	135
Figure 5.7 The stages and steps taken to analyze the data .....	138
Figure 5.8 Maxwell's (2012) classification of validity in qualitative research .....	142
Figure 6.1 The temporal environment of the activity .....	155
Figure 6.2 The geographical and cultural dimension of the activity.....	156
Figure 6.3 The sudden shift to remote teaching was not a problem .....	157
Figure 6.4 Students were not fully prepared for the shift .....	158
Figure 6.5 Changes were kept to a minimum .....	158
Figure 6.6 Plans for changes after the pilot and training week.....	159
Figure 6.7 The pilot phase seen as an added environmental element leaving a clear impact on the activity.....	160

Figure 6.8 The added environmental layer to the geographical and cultural dimension of the activity of TDP.....	162
Figure 6.9 Students shared learning environments with family .....	162
Figure 6.10 Changes to accommodate the unique learning environment .....	163
Figure 6.11 Impressions about the efforts of the edtech team.....	164
Figure 6.12 Teachers' inability to be actively involved.....	165
Figure 6.13 Remote teaching offered a completely different teaching experience.....	168
Figure 6.14 Teachers reflecting on old practices that cannot be utilized remotely .....	169
Figure 6.15 The effects of remote teaching on teachers' teaching style.....	170
Figure 6.16 Teachers needed to learn on the go using trial and error .....	173
Figure 6.17 Communication e-tools were utilized to replicate the office environment .....	175
Figure 6.18 Teachers found students not ready for the shift.....	182
Figure 6.19 Students lacked crucial skills to be ready for remote learning.....	183
Figure 6.20 Teachers highlight the need for trackable tasks .....	185
Figure 6.21 New PD courses offered for teachers at the beginning of TDP .....	187
Figure 6.22 The rationale behind utilizing trackable learning tasks .....	188
Figure 6.23 e-Tools used by participants while TDP.....	192
Figure 6.24 Teaching remotely had an impact on the way lessons are organized.....	194

Figure 6.25 Materials were modified to suit remote lessons .....	195
Figure 6.26 How an original Kahoot game is displayed on different screens .....	196
Figure 6.27 Artifacts utilized by participants during the activity .....	201
Figure 6.28 The absence of nonverbal cues which served as crucial psychological artifacts during a lesson .....	203
Figure 6.29 Walking around class was another important yet absent artifact.....	204
Figure 6.30 Trackable tasks were not enough .....	205
Figure 6.31 The absence of the "human factor" in remote classes .....	206
Figure 6.32 The inability to interact with students was felt by teachers .....	206
Figure 6.33 Remote support offered by teachers was not always as effective .....	208
Figure 6.34 Students lost access to their peers .....	211
Figure 6.35 Students' need for peers during a lesson .....	213
Figure 6.36 Hardworking students took advantage of the new experience .....	214
Figure 6.37 Shy students became more involved .....	214
Figure 6.38 The role colleagues played during this phase .....	216
Figure 6.39 Access to colleagues was limited at times.....	217
Figure 6.40 The development of the WhatsApp experience .....	217
Figure 6.41 Some traditional forms of division of labor were ineffective.....	222

Figure 6.42 Student participation was not as active remotely .....	223
Figure 6.43 Giving feedback to students remotely .....	224
Figure 6.44 The dynamics of remote classrooms.....	225
Figure 6.45 Colleagues' support was crucial and much appreciated .....	227
Figure 6.46 Teachers' reliance on trackable learning tasks .....	229
Figure 6.47 Behavior management in remote classes was smoother .....	230
Figure 6.48 Actions performed by the subjects of the activity .....	235
Figure 6.49 Expansive learning actions .....	238
Figure 7.1 The main tensions highlighted in this study .....	244
Figure 7.2 Issues that were appreciated .....	246
Figure 7.3 Issues that were redefined.....	251
Figure 7.4 Issues that were a cause of concern .....	257
Figure 7.5 Class and remote experts and beginners .....	264
Figure 7.6 A summary of the issues found in the study .....	269
Figure 7.7 Strategies utilized by participants to sustain the activity of TDP .....	270
Figure 7.8 Recommendations concluded from this study .....	276
Figure 7.9 This study's contributions to the growing line of TDP research .....	284





## Chapter 1: Introduction

It's December 20<sup>th</sup>, 2020 now. If I were to go by the calendar that is. If you ask me or anyone I know, most of us are still not sure how far we are from March 2020, when the whole world experienced one cinematic plot twist. Although Bill Gates had expected it long time ago (Gates, 2015), this major turn of events could not have been more sudden or traumatic, on personal, local and international levels. Just before all of this happened, I was starting my fourth PhD year and was done with data collection and interview transcription. I was in the midst of data analysis when the pandemic, out of nowhere, forced itself on our lives. My thesis had to go on a roller coaster ride until it reached a stable state of purpose—when I finally got the courage to go for it: I took the risk of shifting my thesis focus and studying Covid-19. I have no doubt that any curious researcher in my shoes would make the same decision; you just need to be in my shoes for a day, so allow me to take you through a typical 2020 day to see why I found the risk of shifting my research focus worth the hassle. That is, what led me to attempt this research project?

### 1.1 A typical 2020 day

Today is December 20<sup>th</sup>, 2020; and just like in the movies, we've been stuck in the same day on repeat since March, most of it washing our hands 15 or more seconds. For us today, we see no end in sight; we only see sanitizers, masks, and posters reminding us to sing *happy birthday* twice as we wash our hands, again and again. After spending the day *working from home* and teaching *remotely*, I started writing this chapter. I had nowhere else to go as my life has been on pause since March, and all the coffee shops I usually

frequented in the past are now potential Covid-19 *infection zones*. London, today, went under *lockdown* after a new *strain of the virus* made its appearance in the UK, and “residents across the country were told to keep to their local areas” (Ross & Spence, 2020, para. 3). We, in the UAE, did not go into another *national sterilization program* (yet!). This program is our version of a Covid-19 lockdown. It started on March 26<sup>th</sup> and kept being extended and changing till it ended on June 24<sup>th</sup> (Naar, 2020). Although the lockdown has officially ended, we remain under the “everyone is responsible” program. This initiative started after one of the rulers in the country had said: “People of UAE are smart people. They understand our messages and they comply with our recommendations” (“COVID-19: Everyone,” 2020, para. 1). These *recommendations* entail a set of regulations enforced on individuals and companies with serious fines ranging from the equivalent of GBP 600 and up to GBP 10,000.

With these new laws shaping the country, anywhere I go since March 2020, there is a security person standing at the door; not to greet me, but to measure my temperature either with a handheld scanning thermometer or behind a screen connected to a thermal scanner (and a camera!). If my temperature is higher than 37 degrees, I won’t be granted entry. People everywhere should always maintain their distance from each other (and I could not be happier about this one!). Sanitizers are everywhere, in all forms: liquid, gel and spray, for human and for surfaces. Masks on people’s faces come in every color and shape, although for some, these masks barely cover their nose or mouth. All of these changes happened so quickly I kept waiting

to wake up from this sci-fi nightmare, one where zombies and weapons have been replaced with masked people and sanitizer sprays.

As someone who is very interested in analyzing the dynamics of human activity and how they respond to change (i.e., the ultimate tension-generating mechanism), I was fascinated by how these dynamics are unfolding, how policies are changing (or not), and how people are responding—you just never know what triggers the next social media uproar. It was not possible to dismiss the urge to study how people are responding to all of these elements, especially to the ones they *cannot* control. But, how can I satisfy the urge to study this change *and* stay true to my thesis?

## **1.2 Grasping the opportunity**

The more I looked into the peculiar situation we are in, the more I saw Activity Theory concepts happening all around me: contradictions, externalization, appropriation, concept formation, concept renegotiation, all of it; double-sided arrows were popping everywhere. But, I also feared that these changes and the tensions they created were not going to be as *intense* as a thesis would require—Nobody knew anything back then, and one can argue we still don't. Also, taking the risk of shifting my focus could mean throwing away a year's work and starting over. Another challenge was my participants' availability. Their plates were already overfilled, especially during the early days of the pandemic, and I don't blame them if they felt a little bit reserved about sharing (or maybe exposing?) their experience in an unfamiliar territory. I ended up in a "I really want to, but I don't want to" corner.

But, Covid-19 changes were happening at what felt like the speed of light, in a very bad sci-fi movie kind of way (i.e., nothing made sense). I had to make my decision even faster—Should I let it go? Or can I go for it? As I weighed my options, a light bulb moment happened: why am I assuming that I have to throw away my 2019 data? It was then that I realized I still had access to the *same* participants whom I interviewed *exactly* a year prior. They were still at the *same* institution teaching the *same* program/courses and the *same* type of students. Nearly all the variables (i.e., activity system elements) of the teaching activity remain relatively the same<sup>1</sup> when compared to their 2019 experiences, *except for the pandemic*. It was a *golden* research opportunity because now I have *pre-* and *during* points of reference, something Activity Theory posits is crucial to analyze any activity. It was a dream come true for an ambitious early career researcher who's highly interested/invested in Activity Theory.

I took the risk; I redirected the focus of the study to Covid-19, hoping for a caterpillar transformation to unfold—and for the pandemic to end, but *after* my

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<sup>1</sup> I say *relatively the same* because, as Activity Theory posits, any human activity is in a constant state of transformation and change; concepts and elements are almost always being renegotiated one way or the other. However, these changes can be drastic, like in this study, or they can be minimal preserving the essence and general form of the activity. More on this will be shared in Chapter 2: Theoretical Framework.

data collection. With this hasty *final answer*, I had to decide where I am headed —What is the goal of my Covid-19 study?

### **1.3 Motivations for the study**

This study employs a qualitative approach, and Maxwell (2008) cautions qualitative researchers against aimless research attempts. “Without a clear sense of the goals of your research, you are apt to lose your focus and spend your time and effort doing things that won’t contribute to these goals” (p. 219). He further suggests a few questions that should help a researcher clarify their goals and identify the contribution they seek to make to the field: “Why is your study worth doing? What issues do you want it to clarify, and what practices and policies do you want it to influence? Why do you want to conduct this study, and why should we care about the results?” (p. 216)

#### **1.3.1 Why is the study worth doing?**

The practice of *teaching during a pandemic* (TDP) is bound to change in ways we cannot surely predict, and it might not even last for long, I hope.

Nonetheless, the pandemic has already triggered a transformation wave in the ways we understand and practice teaching in general, and TDP in specific. It further highlighted the deficiencies *and* the areas of strength in our educational systems. There is no doubt that studying this pandemic-triggered transformation from its early days and tracing its development will help us better understand its challenges, effects, and maybe direction. Studying these elements early on can help us better shape the end result, if there is one. As Gedera (2016) asserts, “every action has *its own history*, and as the activities

develop, it is important to understand that history in order to grasp the current situation” (p. 56, emphasis added). Consistent with this view, *this thesis is a rudimentary attempt to document this history, by closely investigating how the practice of TDP came about in a local context and critically gauging the impact it has had on instruction in its early stages.*

### **1.3.2 What issues does the study want it to clarify, and what practices and policies does the study want it to influence?**

By undertaking a historically-situated analysis of the early development of TDP, I aim to shed some light on how the practice has emerged among a group of higher education teachers in the UAE. The study will highlight the struggles teachers have faced, the concept-negotiation experiences they've been through, and the early resolutions they have developed during their first attempt at TDP. Understanding these dynamics should allow researchers and policy makers to identify the issues that should be addressed or further supported to nurture the growing practice of TDP, or at least understand its impact on teaching and learning as we move forward. In this respect, *this thesis is a modest attempt to highlight the issues, challenges, and strategies that are shaping the activity of TDP at a local level.*

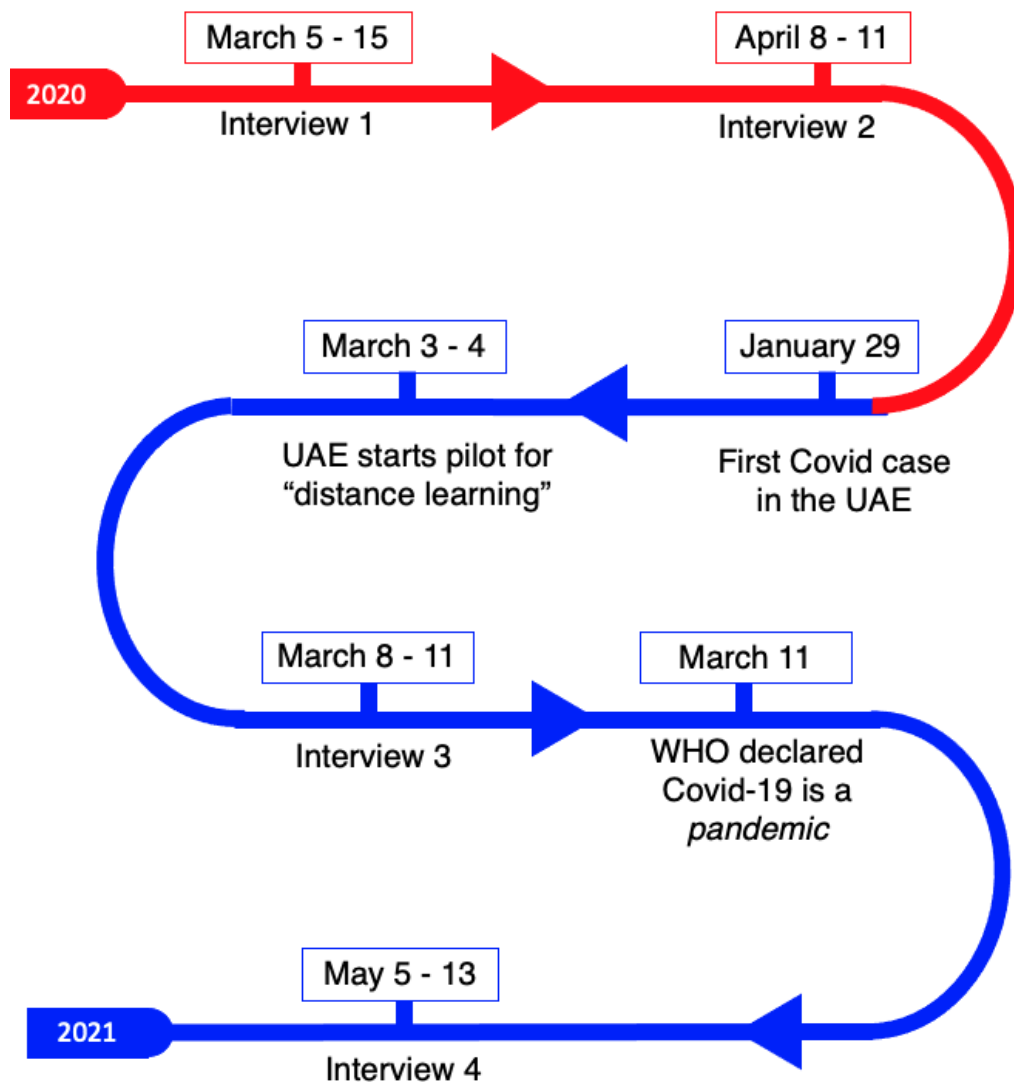
### **1.3.3 Why do I want to conduct this study, and why should you care about the results?**

I want to do this study mainly because I am a firm believer in the importance of context in shaping the experiences of people. I also strongly believe that any understanding of human activity can only be done by understanding its

history. By examining the development of this turning point at a local level, the study looks closely into the appropriation of *the cultural concept* of TDP in its early stages; I emphasize early stages because our understanding, as individuals and as a system, of TDP is still being negotiated and appropriated. Another unique aspect about this study is one that can rarely be seen in other TDP studies: this research project employs a pre-pandemic set of data (of the same participants) that allows for historically and contextually tracing the participants' progression. The study uses participants' 2019 views on learning and their *pre-pandemic* instructional practices as a backdrop for the analysis of their 2020 experiences with TDP. This set up has created the perfect opportunity for me to have points of reference that mark their activity's historical development (see Figure 1.1). Reflecting these views, *this thesis contributes to the growing body of knowledge of TDP at a local level, using an in-depth qualitative approach, and adopting a historical-cultural analytical approach.*



**Figure 1.1 Points of reference used to situate the historical development of TDP in this study**



Now that my *why* became clear, I had to decide my *how*. Before sharing these details, allow me to share my philosophical assumptions about the world and knowledge of it. These assumptions greatly shaped the way I understand and approach this research project. An understanding of these views should clearly explain the *how's* of the study: how I chose to define the research issue and how I chose to design the study.

## 1.4 Philosophical underpinnings

Knowing where a researcher stands in relation to understanding reality (ontology and epistemology) is crucial to a comprehensive and critical understanding of a study. The way a researcher views the world and how knowledge of it can be acquired shapes the way they define their research focus, design their study, interpret their results, and arrive at their conclusions and implications.

### 1.4.1 Ontology and epistemology

Nearly four years into this PhD program, I think I am finally *starting* to understand these concepts and how they can affect my approach to research. Firstly, I understand that a research paradigm is not a matter of *choice* but rather a *reflection* of my beliefs and assumptions; it might change but not to suit a research project, rather to match my developing conceptualization of the world. I understand that reality, or the world around/within us, is perceived *and* investigated in “strikingly different ways” (Cohen et al., 2018, p. 5) guided by different values and principles. These different ways of understanding reality and knowledge of it are *all* valid and have produced their own lines of research. While one field, such as social sciences, can be dominated by a certain philosophical orientation, a researcher is not restricted by their fields or research interests to one view of the world. In fact, I believe being aware of this variety has made conducting and reading research more interesting for me because, as noted by Grix (2002), “the same social phenomenon” can be envisaged and investigated differently by researchers who adopt different

ontological and epistemological views, yielding different reports or views of the same issue.

Although interpretivism sounded appealing for me at first, I find it inherently parochial as it dismisses the idea that the world can/does exist beyond our understanding of it, whether we can (attempt to) reveal this form of reality or not is another issue. Upon further reading (e.g., Archer et al., 1998; Haigh et al., 2019; Maxwell, 2008, 2012, 2018; Maxwell & Mittapalli, 2010; Mingers & Standing, 2017; Sayer, 2008; Sayer, 1992), I found my answer in *critical realism*, I think. As I see it, it combines both ends of the continuum. Wynn Jr and Williams (2012) explain, “critical realism acknowledges the role of *subjective knowledge* of social actors in a given situation as well as the existence of *independent structures* that constrain and enable these actors to pursue certain actions in a particular setting” (pp. 787-788, emphasis added). However, not surprisingly, “there are ongoing philosophical debates over realism that remain unresolved, and realist philosophers themselves disagree about many of these issues” (Maxwell, 2012, p. 3). Hence, I should elaborate on the critical realism strand that shapes my philosophical understanding of reality and of this study.

#### **1.4.2 Critical Realism**

My understanding of critical realism draws substantially from Maxwell’s views and writings (e.g., 2002, 2012, 2018). That is, being a critical realist, I believe in the existence of a complex reality on its own—*ontological* realism, and yet, at the same time, I believe that people’s understanding of this shared reality,

with its different layers and levels, is firmly based on *their own* understanding of it, an understanding that is endlessly being renegotiated by their experiences, their beliefs, their education, and their social/cultural surroundings—*epistemological* constructivism and relativism (Maxwell, 2012). This means there will always be different interpretations of the same level of reality that is experienced by many, highlighting the need for conducting research that seeks to question and report the different ways people perceive this shared reality. At the same time, as Archer (1998)—a prominent critical realist— explains, I acknowledge that “explanation of social matters requires the generic assertion that there is a state of the matter which is what it is, regardless of how we do view it, choose to view it or are somehow manipulated into viewing it” (p. 195).

While acknowledging the importance of the social construction of reality and the phenomena experienced by people, I also believe that we should not dismiss “the structures and mechanisms that interact to produce the outcomes in question” (Wynn Jr & Williams, 2012, p. 788). This interaction between *structures* and *people* within them does not move in one way, rather it is mutually impactful from/on both sides (Haigh et al., 2019). Grix (2010) explains this dynamic nicely, “critical realists tend to distinguish between efficient causes (actors) and material causes (social structures), suggesting that *both represent causal factors*: the first by initiating action and the second by constraining or facilitating action” (p. 85, emphasis added).

A critical realist understanding encourages researchers to continually look for ways to identify and explain these causations while keeping in mind that “all

theories about the world are seen as grounded in a particular perspective and worldview, and all knowledge is partial, incomplete, and fallible” (Maxwell, 2012, p. 5) —that is, there is never enough research to understand our everchanging worldview. While some might argue that such a view makes research pointless, I believe this makes research more exciting because the more we do research, the closer we are to developing a better understanding of our reality and of our growing experiences of it. As Archer (1998) asserts, “indeed one of the defining features of society is its morphogenetic nature, its capacity to change its shape or form” (p. 195).

#### **1.4.3 Critical realism and this study**

In terms of this research project, I found the opportunity to look into the phenomenon of TDP an *exciting* opportunity to recognize and take account of teachers’ *subjective* construction of this new *global* reality as it constructs itself. Adopting a critical realist standpoint encourages me to seek a critical understanding of the phenomena at hand by looking into:

- a) detailed accounts of the phenomenon as experienced by the participants themselves,
- b) the environment and structures (e.g., policies, world events, contextual elements) that have fostered these accounts, and
- c) ways to explain how a and b are connected and affected by each other.

This is why, May (2011) explains, “the task of researchers within this tradition is to uncover the structures of social relations in order to understand why we then have the policies and practices that we do” (p. 11). Such understanding, as discussed in the following chapter, supports and is reflected in the theoretical framework on which this study is built.

### **1.5 Overview of this study**

Adopting a critical realist stance, this study attempts to trace the development of a new form of teaching—teaching during a pandemic—at a higher education institute in the UAE. Guided by Cultural Historical Activity Theory, the study aims to answer one main research question and two sub-questions:

1. How have teachers responded to the demands of teaching during a pandemic?
  - 1.1. What kind of *issues* have teachers faced as they engaged in TDP?
  - 1.2. What kind of *strategies* have teachers utilized to respond to Covid-driven changes and challenges?

Data for the study were collected at various points to trace the development of 12 main participants. This was done through interviews. Using activity systems analysis, data were analyzed thoroughly to identify how the dynamics of teaching have been affected or have developed in response to pandemic-driven changes.

With the very specific and unique focus of this study, I hope findings from this thesis contribute to conversations about the practice of remote teaching

during a pandemic. That is, results from this study, I hope, will highlight the early development of TDP as an emerging practice. As well, by discussing the issues and challenges that teachers have faced, this study concludes a few recommendations that should be considered by higher education institutions to improve not only their preparedness for TDP, but also their general approach to teaching and learning. This study, also, makes a hopeful contribution to theory which addresses a very important element that is often taken for granted and implicitly included despite its impact. I also, in the discussion section, propose a typology that can be applied to learners and can help us become more aware of the differences between in-class and remote learning experiences.

## **1.6 Summary**

In this chapter, I took you through two journeys, one concerning how the focus of the thesis came to be, highlighting the importance of the study and its anticipated contribution to the field and to the growing body of knowledge of TDP. The other short-lived journey shed light on how my philosophical beliefs and assumptions about the world have shaped this study, with the aim to underpin the choices I've made and to frame the way I define the issue at hand. The next chapter explores the theory that helped make this study happen. An early grasp of it will further illuminate the decisions I made in terms of research design, data collection, and data analysis.

## Chapter 2: Theoretical framework

*“The revelatory experiences theory permits occur as moments of altered perception when we see what we did not see before, when refigured ideas and objects educate us to understand the world more complexly. These moments move us as deeply as an artist’s unique visions. The standard of beauty in theory is part of its essence as much as truth-seeking.”*—(Kaptelinin & Nardi, 2012, p. ix)

Not to sound too poetic for a thesis, but this quote aptly describes my first encounter with Activity Theory and its generations. As I elaborate below, my *revelatory experience* with this theory has been mainly due to its ability to preserve the complexity of the social world we investigate without overwhelming the researcher with more than they can handle.

In this chapter, I discuss the origins of the theory, its principles and its role in this study. I also argue for the expansion of the theory based on the theory itself—this is why my account of the origins of the theory is not as brief as one might expect in a thesis as this detailed account is needed to support my theoretical arguments towards the end of the chapter. But, before that, Bligh asserts, “the onus is currently on researchers to be clear about the different modes of theory used in their projects, using whatever terminology they prefer, and to chronicle, diligently and meaningfully, the attendant distinctions when reporting their research to others” (p. 144). Having read this quote from Bligh’s (2020) discussion of *theory disputes* in the field of technology-enhanced learning, I find it important to share my understanding of why and how theory can be used in research.



## 2.1 Theory in research

As stated by many researchers, the level at which the term *theory* is defined and the way it is used in educational research is not unilateral (Bligh, 2020; Clegg, 2012; Hammersley, 2012; Hutchings & Huber, 2008; Tight, 2015). With many factors at hand, theory has been defined at various levels of abstraction (Hammersley, 2012; Trowler, 2012) and has been used in different ways and at different levels of research quests (e.g., Ashwin, 2012; Bligh, 2020; Bligh & Flood, 2017; Passey, 2020). These stark differences could explain the unhealthy relationship I had with theory prior to starting this PhD program. Theory was an idealized monster that I knew better than to touch in my modest, localized research attempts. It was very much like my mother's valuable for-guests-only china, coming near it is as deadly as attempting to touch it, or more daring: use it—you don't want to use it. But, my theoretical upbringing at Lancaster University allowed me to see that theory is more approachable than I had thought. Thanks to the instructors, readings, classmates, webinars, discussions, and other TEL-program contributions, I could say that theory and I are good, if not best, friends now.

With this in mind, I find May's (2011) definition of the term *theory* to be consistent with my current views. May clarifies:

The idea of theory, or the ability to explain and understand the findings of research within frameworks that make 'sense' of data, is the mark of a mature discipline whose aim is the systematic study of particular phenomena. In our case, as social researchers, these phenomena are the dynamics, content, context and structure of social relations. We

aim, with our training and experiences of doing research in mind, together with the perspectives that guide our thinking, to understand the social world. This requires the development, application, testing and even falsification of social theory. (p. 27)

Accordingly, I believe a researcher's relationship with theory is a two-way street. Theory can guide and inform them, and their research can also inform and shape theory. This means I consider theory to be useful at various stages of a research project, deductively and inductively. And, although I have my theoretical preferences, I value the insights other theories or approaches can give into the matters I seek to observe and attempt to further understand. One last important aspect to clarify in relation to the application of theory in research is the relationship between theory and practice, which is, unsurprisingly, an issue that has attracted considerable debate (Bligh, 2020). While I agree that theory and practice are two distinct areas that can exist on their own, I strongly believe that both theory and practice should be treated as mutually impactful—they both inform *and* challenge each other.

For the purposes of this study, theory has been used deductively to formulate questions for data collection instruments, and to analyze and report the data in a meaningful and organized manner. Using theory helped me identify the elements that I need to look for and analyze, but when the theory failed to account for all parts of the picture I had observed, theory and I exchanged roles. To further elaborate on this exchange, I should first introduce the theory itself and discuss its assumptions and principles.

## 2.2 Cultural-Historical Activity Theory (CHAT)

I had stumbled upon activity systems and Cultural-Historical Activity Theory (CHAT) in Module 3<sup>2</sup>. It was a unique eureka moment in my journey with theory at LU as it introduced me to a theoretical tool that helped me make sense of my research *and* gave me the tools to collect and report data in meaningful ways, without dismissing the individual and/or system views of the puzzle. However, this appreciation was preceded by an overwhelm with what seemed *too much* to handle all at once. I believe it looked intimidating at first because I looked at the final product (the model) before trying to understand or explore its origins. As CHAT itself suggests, one needs to trace the historical development of CHAT to fully understand and appreciate how CHAT is the way it is now, and to utilize it to its full potential. Kaptelinin and Nardi (2009) acknowledge this need, “the underlying ideas of the theory are difficult to grasp without an understanding of where the ideas come from” (p. 30).

Accordingly, our theoretical journey in this chapter will be chronological. I start with the theory’s early days with Vygotsky highlighting his unique understanding of human action, then Leontiev explaining his focus on the social dimension of human activity, and finally Engeström discussing his

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<sup>2</sup> Module 3 is one of the courses that I took during my PhD studies at Lancaster University. The course, titled Researching Technology Enhanced/Networked Learning, Teaching and Assessment, was led by Dr Brett Bligh and covered important topics and theoretical perspectives, including Activity Theory.

significant contributions that made the theory more accessible for researchers. This will be followed by discussing a hopeful theoretical contribution as I argue for adding an element to Engeström's model using the arguments of Vygotsky, Leontiev and Engeström himself. Finally, I connect the dots; I illustrate how CHAT and its concepts align to my critical realist views and how they were used in this study at its different stages.

### **2.2.1 Vygotsky's influence**

Lev Vygotsky is well-known for his interest in the human mind and how its development can be traced; this interest was influenced by Marx's notion that "historical changes in society and material life produce changes in 'human nature' (consciousness and behavior)" (Cole & Scribner, 1980, p. 7). By the same token, Vygotsky asserted that "culture and society are not merely external factors influencing the mind but rather generative forces directly involved in the very production of mind" (Kaptelinin & Nardi, 2012, p. 14). In this sense, the development of human mind is achieved, as Vygotsky held, "through the internalisation of relations that previously existed in the social world" (Bligh & Flood, 2015, p. 45). For Vygotsky, this meant that any attempt to understand the development of our minds should not isolate an individual from their environment. With this belief, he was interested in observing and analyzing the relationship a person has with their social surroundings (culture and society) and how these elements might contribute to the development of *higher mental functions*—mental capacities that are unique to human and that develop as a result of interacting with the environment; these functions include

“linguistic thought, intellectual speech, ‘logical’ memory” (Bakhurst, 2007, p. 53) and others.

Consistent with this view, Vygotsky identified two unique elements in one’s environment that can contribute to the shaping and development of the mind: *tools* and *more capable peers*. His conceptualization of tools, or *artifacts*, was unique in the sense that his notion of a tool was not limited to physical objects; he rather extended it to include *psychological tools*. Whether it is language, memory, or living an experience, psychological tools are “fundamentally social” (Bakhurst, 2007, p. 53) and not only contribute to the development or shaping of human mind, behavior, and life, but interacting with these tools also allows us to experience life in ways we could never do without them. Vygotsky explained, “by being included in the process of behavior, the psychological tool alters the entire flow and structure of mental functions. It does this by determining the structure of a new instrumental act” (1981, p. 137 as cited in Wertsch, 1995, p. 63)—a new instrumental act being a new form or an updated understanding of the action or act. While Vygotsky’s understanding of tools can be clearly accounted for in the latest generation of CHAT, the concept of *more capable* others cannot. Vygotsky highlighted the role “more capable peer” (Vygotsky, 1980, p. 86) as a form of essential social mediation that enables someone to reach their potential (higher) developmental level. The role of more capable peers is highlighted in CHAT in two indirect ways: as a mediational *tool* and a form of *division of labor*. The reason I believe these two ways are an indirect mention of more capable peers is the lack of focus on *more capable*.

Ultimately, such understanding of the unique relationship between the human mind and the environment, as Cole and Wertsch (1996) explain, suggests that “the development of mind is *the interweaving of* biological development of the human body *and* the appropriation of the cultural/ideal/material heritage which exists in the present to coordinate people with each other and the physical world” (p. 252, emphasis added). This interweaving is aptly explained by Vygotsky’s concepts of *internalization*, *externalization*, *appropriation*, and *mediated actions* all of which are fundamental concepts shaping CHAT, but can be difficult to discuss without showcasing how they apply to real life, so to explain these concepts, I find my 2-year-old niece, Sarah (nickname), a great real-life example of how these concepts can affect one’s *development*—the ultimate goal of any activity system.

When Sarah was first introduced to the iPad (a *physical artifact*) at a few months old, all she did was try to bite its cover. Seeing her older sister—a *more capable peer*—use it a few times, she started to aimlessly tap on the screen. That is, she used *her observations* of her sister as a *psychological artifact* to help expose her to a different way to use the iPad, to *transform* her iPad experience. However, she was barely a year old, so even though she saw the full experience in front of her, her ability to fully understand what she saw was limited. Hence, she could not grasp the *full* experience. Rather, through *internalization*, which heavily depends on her own ability to *appropriate*—“take something from a culture and use it as part of your own” (Cambridge Dictionary, n.d.), she only took parts of the experience she observed and applied what she could comprehend. This means Sarah’s *own understanding* dictated what she can internalize: the tapping bit. Bakhurst

(2007) elaborates on this, “internalization, Vygotsky explains, is not a matter of merely transplanting a social activity onto an inner plane, for *the internalized practice is transfigured in the act of internalization*” (p. 45, emphasis added). As a result of this newly internalized practice, instead of biting the cover, Sarah started to aimlessly tap on the iPad. This upgrade or transformation in Sarah’s iPad use happened as a result of her interaction with the environment hosting her. Vygotsky explained such transformations by the general genetic law of cultural development which proposes “interpersonal/intermental processes are *the precursors and necessary condition* for the emergence of the individual/intramental (psychological) processes” (Cole & Wertsch, 1996, p. 254, emphasis added). This means, Vygotsky believed our advanced forms of activities and mental functions exist first at a social level *and then* are integrated at an individual level. “In reality, the ‘inner space’ of consciousness is a result of individual appropriation of certain kinds of external collective activity” (Lektorsky, 2009, p. 83).

As Sarah’s *higher mental functions* developed, so did her ability to fully understand *and* better appropriate her continuous observations of her sister’s iPad use. Before she was two-years old, she became competent enough to fully understand what was happening in front of her and eventually *renegotiated* her original internalization. That is, she *reinternalized* the experience and was able to do *more than* tapping although technically her observations were the same since day one; the only change was her ability to appropriate and internalize these observations. Without anyone’s help, she can grab her iPad, press the home button, swipe left and right till she finds YouTube Kids, tap on the app icon, and tap a video thumbnail she finds

attractive. I do not think this kind of development is a reflection of a genetic upgrade in humans or an indication of a smarter generation as some might argue, but rather it is a sign that our device use has become so commonplace that children are exposed to the practice heavily enough to be able to fully appropriate the experience earlier than we ever did in the past.

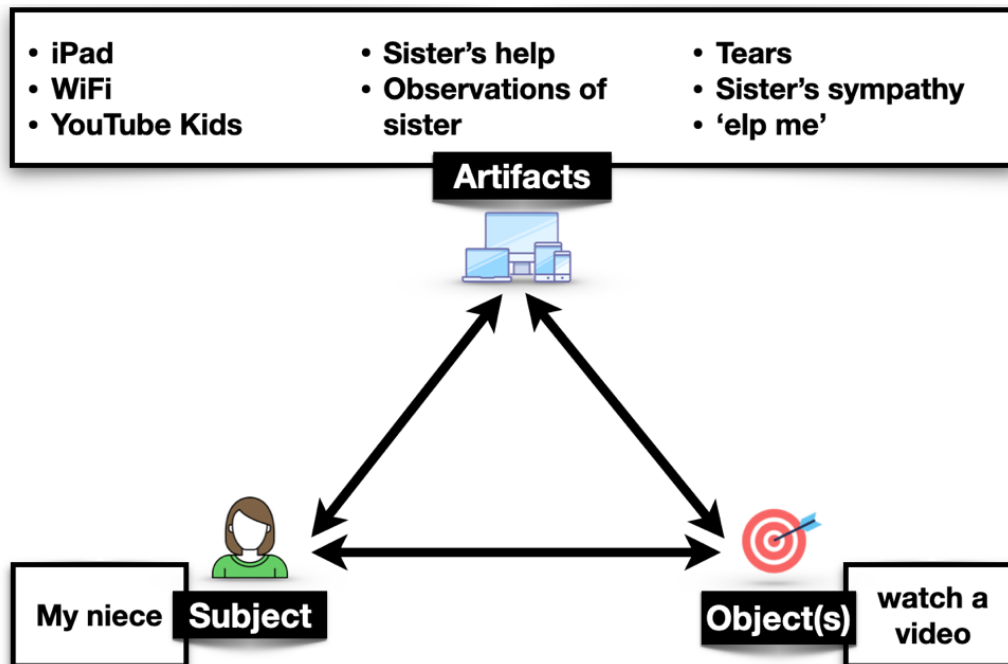
Now, more recently, Sarah's iPad was dropped, and the home button stopped working. When she tried to do what has become common (internalized) practice for her, it did not work. To resolve the problem, she utilized one of her most powerful psychological artifacts: her fast-to-flow-faster-to-disappear tears, with the aim to engage more knowledgeable others around her to assist. When her caring sister came to the rescue, Sarah observed a modified practice which prompted her to *externalize* the practice she had learned; that is, the original process of playing videos on her iPad has become ineffective, so it had to be renegotiated and appropriated to address the current/developing situation. As her sister fixed the problem, Sarah was observing her sister, as always, to learn how to fix the problem herself. However, what she saw her sister do was beyond her reach; it was too complex for her to learn and do on her own next time. Hence, she had to find creative ways to overcome this hurdle, this *tension*: using an iPad without a functioning home button. She, astutely I must say, adapted her process utilizing the limited artifacts she has at her disposal. When she wants to watch a video on her iPad now, Sarah grabs the iPad, looks for someone older, gives them the iPad, says "elp me" in a helplessly cute way, and waits; it has never failed because she never gave it to me (the barely-seen aunt) to experiment and see what a "no" would do. This appropriated practice has



worked enough times that it has been *reinternalized* and has replaced the outdated practice; she does not even try to press the home button anymore—fascinating adaptation, isn't it? Vygotsky saw such adaptations as *qualitative transformations*; each one of them, as can be seen in Sarah's iPad use, "provides the conditions for the next stage and is itself conditioned by the preceding one; thus, transformations are linked like stages of a single process, and are historical in nature" (1980, p. 46).

Using my niece's example, one last important Vygotskian understanding to highlight is *mediated action*, which summarizes the whole experience Sarah went through. When Sarah (the *subject*) wanted to watch a video (her *object*), she sought assistance during the process using different means: a. her iPad, b. the app, c. her sister's knowledge and sympathy, d. her understanding of her sister's actions, e. her powerful tears, and f. 'elp me'. According to Vygotsky, all of these elements are seen as *artifacts* (Vygotsky originally called them *tools* and *signs*) that helped Sarah do what she wants; these artifacts, physical or psychological, acted as *mediators* to help her achieve a goal she would not have been able to achieve otherwise. This is why mediation is seen as an essential process through which humans fulfill their needs, and only through mediation can their actions be led to "transformation or even a redefinition" (Wertsch, 1995, p. 63). This understanding of mediated action is famously represented by a triangle, which can be seen in a more colorful variation in Figure 2.1.

Figure 2.1 Vygotsky's mediated action triangle



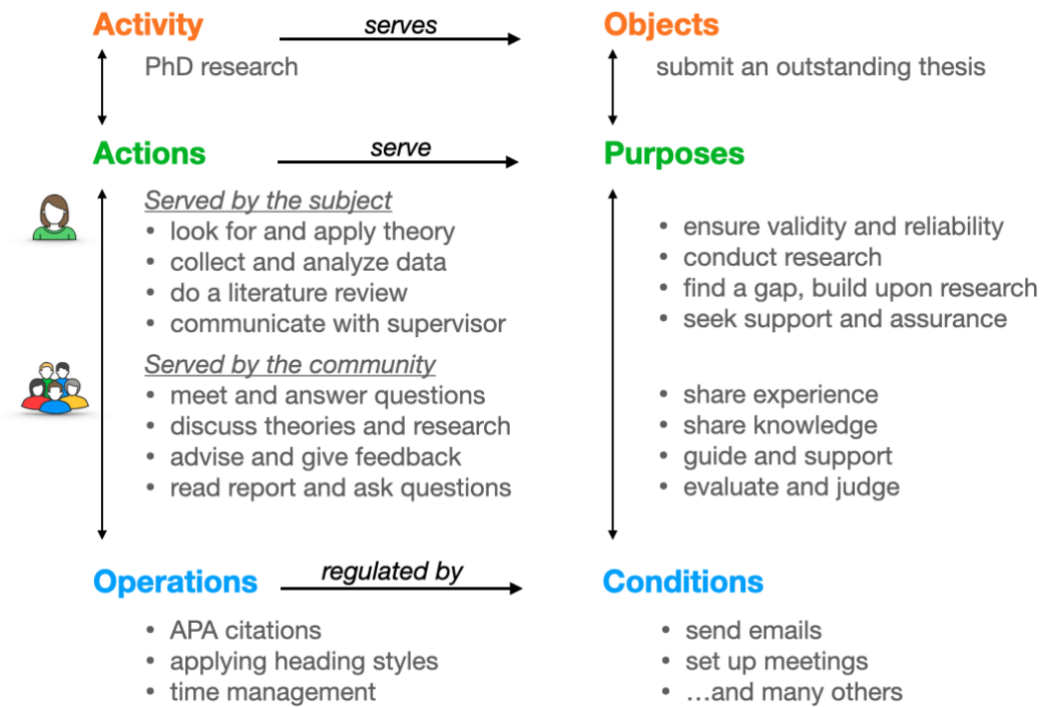
### 2.2.2 Leontiev's theory

Leontiev took on Vygotsky's understanding of mediated action, among other principles discussed above, and Sergei Rubinstein's "principle of 'unity and inseparability of consciousness and activity'" (Kaptelinin & Nardi, 2012, p. 14) and proposed the concept of *activity*. Activities, Leontiev suggested, represent "a system that has structure, its own internal transitions and transformations, and its own development" (Leontiev, 1978, p. 36) and can, accordingly, be seen as a valid "unit of life" (ibid.). Leontiev also asserted that any human activity is always oriented towards an *object*, which he defined as a *collective* human need that becomes the driving purpose for the activity. This collective notion is one of the essential redefinitions Leontiev added to Vygotsky's *individual* mediated action. It is based on the idea that a better understanding of an individual's mediated actions can be achieved if we account for the

bigger picture, for the community. Accordingly, Leontiev proposed that our analysis of human development should account for the *social conditions* that surround their actions. Leontiev proposed that Vygotsky's mediated *actions* “form the practical social modalities through which *activities* are carried out” (Bronckart, 1995, p. 76, emphasis added).

With these views shaping Leontiev's understanding of activity, he suggested that each activity is made up of three levels: *activities*, *actions*, *operations* which have varying degree of societal and consciousness involvement. *Activities* serve a *collective motive* and are performed collectively, *actions* serve a *goal* and are performed by individuals, and *operations* are controlled by *conditions* and performed unconsciously or in a routinized manner that does not require a lot of thought—“An operation is not ‘unconscious’ like the heart-beat, but once mastered, it is done without conscious awareness” (Blunden, 2015b, p. 2). Figure 2.2 depicts these variations using the activity of writing this thesis.

**Figure 2.2 The hierarchical relationship between the activity, actions, and operations**



Leontiev’s breakdown (activities, actions, operations) allows for a comprehensive understanding of activity as a *socially-situated* entity where the *object* of the activity is broken down into *goals*; these goals are served by actions done by the subject and the community. This breakdown is fluid and activity-specific. Bligh and Flood (2015) explain, “Leontiev suggested that activity *generates* actions, and that actions derive their meaning from their place *within* activity” (p. 146, emphasis in original). Bligh and Flood highlight another unique feature characterizing the activity-action relationship. That is the understanding that although activities generate actions, activities themselves can, via internalization and externalization, turn into actions serving other activities. Lektorsky (2009) echoes this understanding and adds,

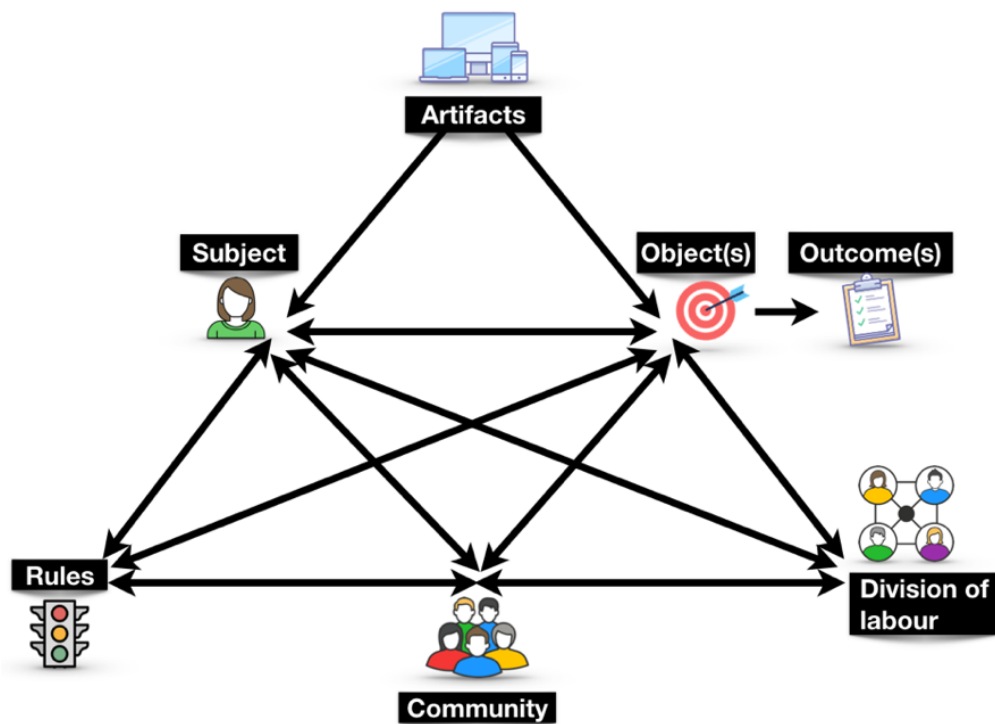
“internalization can be understood as a mode of *individual appropriation* of forms of collective activity” (p. 77, emphasis added).

### 2.2.3 Engeström’s contribution

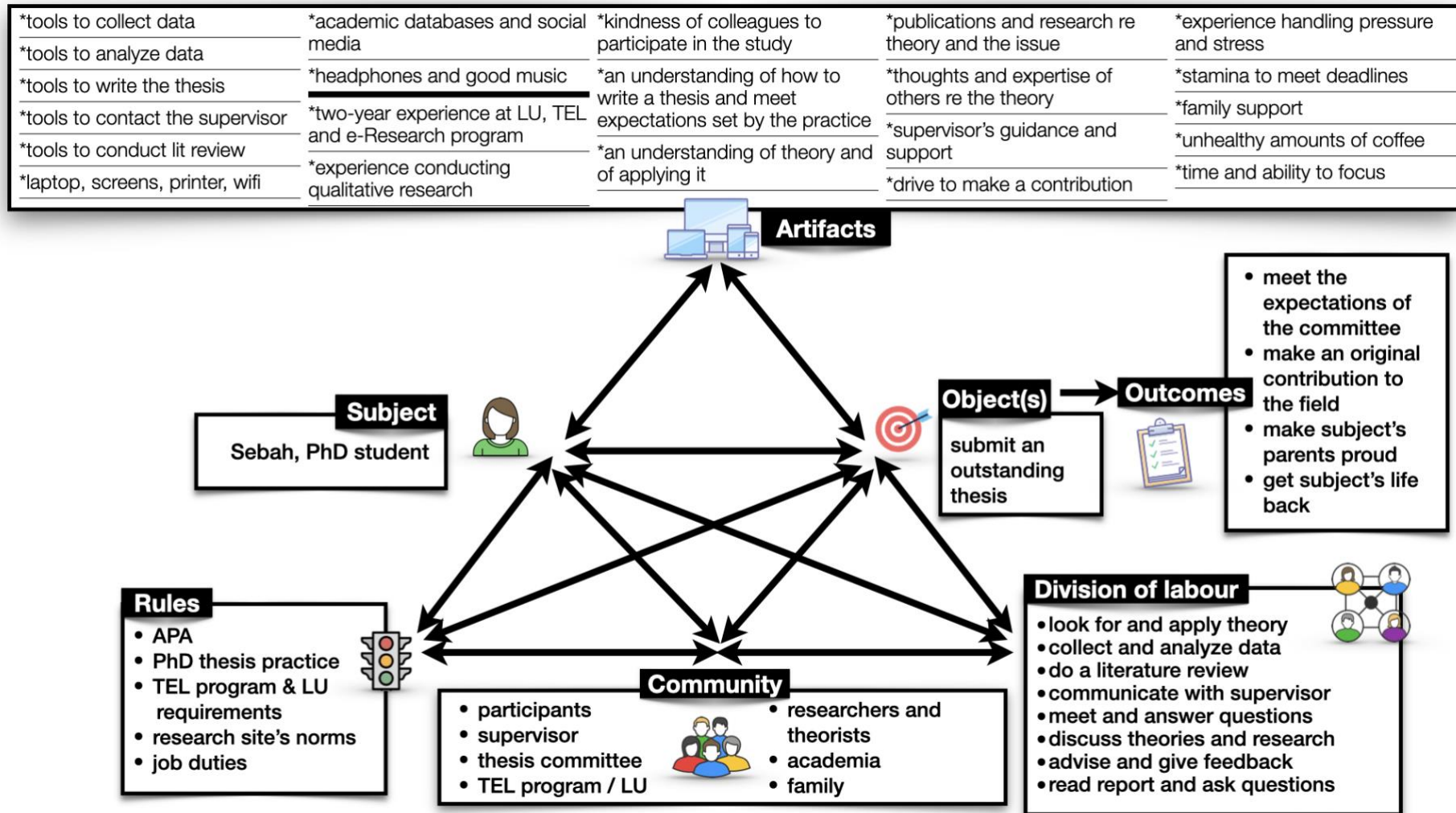
Up until this conceptualization, the theory has been called *Activity Theory*. Engeström built on both Vygotsky’s mediated action and Leontiev’s social framing of an activity and proposed to “depict the structure of a collective activity system” (Engeström, 1999, p. 25). “Individuals, according to Engeström, can carry out actions only within a larger-scale collective *activity system*” (Kaptelinin & Nardi, 2009, p. 99, emphasis added). As a result, Engeström used Vygotsky’s mediated action as the basis of an *activity system* and added the element of *community* which he believed came along with two *mediators: rules and division of labor*. Engeström also proposed a visual representation of this proposed system (see Figure 2.3 for the model and Figure 2.4 for a clear example of the model depicting the activity of PhD research). This model has attracted a lot of researchers who have used it as an “analytical tool used in a wide range of concrete research” (Kaptelinin & Nardi, 2009, p. 99) to offer in-depth analyses of “*the activity level* within the theory, whether for analysing a single ‘system’ or interactions between several” (Bligh & Flood, 2017, p. 130, emphasis in original). Although “not everyone interested in activity theory accepts Engeström’s theory of activity systems” (Blacker, 2009, p. 29), Engeström’s model has been instrumental for many research applications, including Change Laboratories, and has made it possible for researchers to systematically build their studies on the concepts offered by CHAT. Engeström also later proposed what is known as the *third*

*generation of the theory* in which he calls for accounting for more than one activity system for a more comprehensive analysis. This approach encourages researchers to appreciate and acknowledge the interconnected nature of human activity and the environmental factors (which include other activities) that can greatly affect an activity.

**Figure 2.3 Engeström's suggested activity system model**



**Figure 2.4 An example of an activity system model showcasing the activity of doing PhD research**



Additionally, one of the unique analytical aspects about CHAT that has attracted many researchers is its understanding of tensions, called *contradictions*, that happen during an activity. Influenced by Ill'enkov (Sannino et al., 2009), Engeström (2008), introduced the concept of contradictions as a central principle to go along with the model. Although, by definition, these contradictions cause tensions and somehow disrupt the flow of the activity, they “are believed to be helpful in the development of activity systems” (Gedera, 2016, p. 56). Engeström (2008) explains, “contradictions within and between activity systems are a key to understanding the sources of trouble as well as the innovative and developmental potentials and transformations of activity” (p. 5). This is why CHAT perceives contradictions as drivers for change that offer “opportunities for creative innovations, for new ways of structuring and enacting the activity” (Foot, 2014, p. 337). Another important feature attributed to contradictions is the fact that they are, as Gedera (2016) notes, “structural tensions that have been *accumulated over time*” (p. 57, emphasis added). This is why, as Gay and Hembrooke (2004) state, an activity system is always “working through tensions within and between its components” (p. 12) and hence in a constant state of flux. Adopting this view of contradictions, Engeström’s CHAT posits “contradictions are at the heart of human activity and invites inquiry into how, in the past, these have been resolved through practices and how, in the future, they may be addressed anew” (Blacker, 2009, p. 27).

With Engeström’s contributions, CHAT became more accessible to researchers from different fields, especially those who wish to focus on



studying social change or wish to highlight the tensions that face subjects during a certain process. This is one of the reasons I felt tempted to use CHAT in my thesis, but I also found it resonates with my views on the world and how we can acquire knowledge of it. However, I stumbled upon a very unique roadblock when I used the theory in my data analysis. The roadblock was not because I was struggling with understanding the theory—I was at a comfortable stage with it and had applied it several times before. I got stuck because my data showed a possible gap in the theory.

#### **2.2.4 Completing the picture?**

One reason behind my fascination with CHAT and the activity system model is because it reflects the complexity of human activity in an accessible and systematic manner, which makes the messy and sometimes overwhelming process of analyzing data a lot more manageable. I also found CHAT to reflect my critical realist belief of causation and that any human activity is part of wider system that affects and is affected by these entities around and within the activity. However, as I tried to map my participants' experiences to an activity system for this thesis, I struggled a lot with something that felt *missing* from the system. I could not place the pandemic and its effects in the model. While one might argue that pandemic-driven changes can fall under *rules*, I hit a wall when I started to look for ways, using the dynamics of an activity system, to explain many tensions, including: my participants' emotional response to the pandemic, the need for a reconfiguration of the rules, the need to redefine how learning is best served, or the tensions caused by the change in the delivery format. These changes should be, in theory, initiated or

mediated by elements in the activity system, but none of the elements in the system could fully and directly explain the disruptions inflicted on the system and its elements because of the pandemic.

The harder I tried to align or map these transformations and tensions caused by the pandemic to the elements within Engeström's model, the clearer it became to me that an activity system model must account for the *environment* surrounding an activity as a force that not only passively *defines* and *hosts* an activity but also an element that actively *contributes* to and *shapes* the activity and all elements within it over the course of an activity. The environment, as my study reveals, is central to all the elements within an activity in a way that goes beyond its assumed role as a boundary and a host. This role might not be a leading one in some situations or activities, but its presence has an impact that cannot be dismissed; in fact, in one of his early questions in *Mind and Society*, Vygotsky (1980) wondered: "What is the relation between human beings and *their environment*, both physical and social?" (p. 19, emphasis added). The environment, as my study reveals, is integral to human activity because it defines and affects many elements, including: a. the ways which rules are set, b. the cultural development of artifacts present in the environment, c. the composition of the community contributing to the activity, d. the dynamics of the division of labor and power relations within it, and f. the atmosphere controlling the subject and community members. These elements are dependent on the environment in ways that cannot be dismissed or passively attributed to a hidden element in the background.

Seeing my data highlighted the need for recognizing the environment's active involvement in an activity system, I was prompted to go back and reread some of my favorite staple readings about CHAT and Activity Theory (e.g., Daniels et al., 2007; Engeström et al., 1999; Kaptelinin & Nardi, 2009, 2012; Wertsch, 1981). I was driven by one clear question: what does the theory say about the environment's role in human activity; is it just a superficial power that aimlessly hovers around us? Or does it assume some kind of power or has an impact during the course of activity? The more I read about/from Vygotsky, Leontiev, Engeström and other theorists who shaped and discussed Activity Theory, the more convinced I became that any analysis of an activity system would benefit greatly from a more inclusive view of the environment as an *active part of* an activity system; not just as a host or a border that can be easily overlooked or aimlessly integrated within other elements.

In the following subsections, I will highlight the various arguments that were made by Vygotsky, Leontiev, and Engeström and explain how these arguments foreground the need to account for the environment as part of an activity system. Then, I build on these arguments to propose ways to define this element and approach it in research.

#### **2.2.4.1 Vygotsky and the environment**

To start with, van der Veer (2007) explains:

Vygotsky argued that *the individual and environment* should not be viewed as *distinct, separate factors* that can in some way be added up

to explain the individual's development and behavior. Rather, we should conceive of individual and environment as factors that *mutually shape each other in a spiral process of growth* (p. 22, emphasis added).

He further clarifies that, according to Vygotsky, when defining the boundaries of the environment, one should "to a large extent" take into account the individual themselves because despite the existence of an objective physical environment, "it will always be interpreted in different ways" (p. 22) according to the individuals experiencing and living in it. He explains that the difficulty to "define the environment" for humans is because the environment reacts to our different "actions, capacities, age, and so on" (p. 23). This reaction is not one-way; Vygotsky suggested that "human beings are not passively reacting to the environmental stimuli but actively determine their own behavior through the creation of a specific nature, namely, signs" (p. 28). I was left to wonder: if the environment is unique to every activity, why do we not include it in our analysis of the activity?

The active involvement of the environment in human activity and lives can also be demonstrated in the way our minds or consciousness develops. As noted by Bakhurst (2007) and van der Veer and Valsiner (1991), Vygotsky believed in the importance of the environment in shaping the minds of learners: "the only thing caretakers and teachers can do is to arrange the environment in which children and pupils are situated in such a way as to maximize the possibilities of the formation of new reactions" (van der Veer & Valsiner, 1991, p. 53). This is why he suggested replicating the "conditions in

which culture becomes accessible to the child” whose access to the environment is limited because of a disability (Bakhurst, 2007, p. 56). This recommendation highlights the importance Vygotsky attributes to the environment and its active role in shaping our lives.

Vygotsky also believed in the constraints the environment places on our existence as he viewed “psychological tools [to be] more potent the less they are tied to specific contexts” (ibid., p. 69). While this observation was made by Bakhurst (2007) to explain Vygotsky’s appreciation of our ability to generalize our understanding of a certain experience to form an abstract concept applicable to any environment, I believe it also supports the idea that the environment is not just an entity that *hosts* our existence, but it is also shaped by our understanding of it. It is not *outside* the picture, but an important *part of it*. Kozulin (2003) further suggests, “each culture has *its own set of* psychological tools and situations in which these tools are appropriated” (p. 16, emphasis added), and “symbolic tools ... *have no meaning whatsoever outside the cultural convention* that infuses them with meaning and purpose” (p. 26, emphasis added). A cultural convention is very much dependent on the space and time within which it exists, that is: the environment.

The last Vygotskian argument I’ll highlight is by Vygotsky himself:

In subjecting to his will the process of his own reactions, *man enters in this way into a substantially new relation with the environment*, comes to a new functional exploitation of elements in the environment as stimuli-signs which he uses, depending on external means, and directs

and controls his own behavior, controls himself from the outside, compelling stimuli-signs to affect him, and elicits reactions that he desires. ... Man created not only the tools for work with the help of which he subjected to his will the forces of nature, *but also* the stimuli that induced and regulated his own behavior, subjecting his own powers to his will (Vygotsky, 1999, p. 63, as quoted in Sannino, 2015, p. 6, emphasis added).

Recognizing an activity system as a representation of this person-environment *relationship*, it seems logical to ask: why do we only account for “[wo]man” in this activity? On what grounds do we dismiss their partner in this relationship, the environment? I’m not a relationship expert, but I would argue that such an imbalance inhibits the potential of any relationship, especially when it is a relationship that, as Leontiev described, “has structure, its own internal transitions and transformations, its own development” (1978, p. 37).

#### **2.2.4.2 Leontiev and the environment**

Having established the importance of the environment in human activity from a Vygotskian perspective, I started looking into Leontiev’s theoretical exploration of Activity Theory and the study of human life and mind. I found that Leontiev built his argument for introducing the concept of objective activity as a meaningful “unit of life” (1978, p. 36) on the belief that human activity “must not be considered as isolated from social relations, from the life of society” (p. 37). He also made it clear that each activity “depends on [a person’s] place in society, on the conditions that are his lot, and on how this

lot is worked out in unique, individual circumstances” (p. 37). He later concluded, “in a word, society *produces* the activity of the individuals forming it” (p. 37, emphasis added). I understand that these arguments were made to support the hierarchy of activity/motive ↔ action/purpose ↔ operation/conditions, but I believe the same exact arguments can be made to argue for the inclusion of the environment as part of the “*whole*” (p. 36). I mean, with the importance Leontiev attributes to society in any activity, I argue that this importance extends to the environment as well. A *society* can only be defined by its environment, its space and time. I am a Syrian living in a Syrian community based in a *multicultural* environment in a *foreign* country. I have no doubt that *my* “Syrian” society is completely different from the “Syrian” society that accommodates my Syrian uncle living in a Syrian-only community based in the fancy suburbs of Aleppo, Syria. Both Syrian communities are in theory the same, but the spaces that host them are different leading to different dynamics and different rules shaping them. I also believe the smallest variation in an environment is enough to make a society different; if we take changes in weather as an example, UK’s warm is UAE’s winter, and this difference in and of itself creates so many other variations in the way language and life is appropriated for their societies, and accordingly, activities that take place within them. All of this to say: a society is greatly defined by *the time and space* within which it exists, by *the environment*.

In addition to foregrounding the role society plays in an activity, the way I understand it, Leontiev (1978) also believed in the importance of the

environment as well. When he introduced the idea of motive vs. purpose, he said:

Separate concrete *types of activity may differ* among themselves according to various characteristics: according to their form, according to the methods of carrying them out, according to their emotional intensity, *according to their time and space requirements*, according to their physiological mechanisms, etc. (p. 45, emphasis added).

“Time and space” are exactly what I mean with the term environment, and if Leontiev believed they do in fact determine the course of an activity, should we not clearly and openly account for their variation when analyzing an activity system?

#### **2.2.4.3 Engeström and the environment**

Finally, reading into Engeström’s development of the theory, I also contend that his theoretical formulation supports the inclusion of the environment although his model in its current state does not necessarily reflect this. Firstly, some might argue that Engeström accounted for the environment via the addition of the socially-mediated aspect of activity, which is made up of: community, rules, and division of labor. Although I believe these elements are fundamental aspects of the environment and are fundamentally dependent on the environment, I strongly believe the scope of these elements is limited to



*individuals* in an environment; these elements do not encompass *the culture*<sup>3</sup> that they inherent and shape, the *time* they live in, and the *space* that hosts and shapes their activity. It is vaguely implied in the model in ways that might encourage researchers to dismiss the environment or reduce it to a set of *rules* or norms that enable or restrict the activity.

Moreover, in his discussion of debates on “key dimensions of the very idea of activity” (p. 21), Engeström (1999) identifies *historicity* as “concrete historical analysis of the activities under investigation” (p. 25), and as other CHAT theorists, considers it one of the main principles shaping the theory. In his discussion, he highlights the need to “avoid imposing rigid, one-dimension sequences on social-reality” and to ensure “seriously analyzing the historical development that has led to those differences” (pp. 25-26). He also further discusses the importance of *historicity* as an analytical advantage of CHAT. Describing activity systems, he asserts:

their problems and potentials *can only be understood* against the background of their own history. *History itself needs to be studied* both

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3 I adopt Cole’s (1996) definition of culture, a concept Cole believes is connected to time and space. Cole suggests “different cultural circumstances provide different stimuli to their members, who, in consequence, learn different kinds of responses. The sum of that learned behavior in a particular time and place serves as the working definition of culture” (p. 32).

as the local history of the activity and its objects and as the history of the theoretical ideas and tools that have shaped the activity (2008, p. 207, emphasis added).

With historicity being a defining aspect of the theory, a researcher is encouraged to account for “past cycles of the activity system” (1999, p. 26) in their analysis of the current form of the activity. This is deemed important in an activity system analysis because “the reorchestration of the multiple voices is dramatically facilitated when the different voices are seen against their historical background as layers in a pool of complementary competencies within the activity system” (p. 35). The question, here, is if CHAT considers *historicity* as a central principle, so why is it not clearly accounted for in the model? An important point to make here is while Engeström seems to focus on the notion of historicity as reflecting the need to contextualize an activity beyond its immediate timeframe, I also believe it demonstrates the role time plays in shaping an activity *as it happens*. In fact, Sannino and Engeström (2018) explain:

*History is always present in human activity. Layers of historically earlier forms of the activity can be both constraints and resources. They persist in practical routines, in ways of thinking, in material artifacts and rules.* If one tries to understand activity without historicity, consequential phenomena such as the cleaners’ bad conscience are easily dismissed as arbitrary irrational features, even pathologies, of certain individuals or classes of people, to be eliminated or, at best, ignored.

The founders of activity theory —Vygotsky, Leont’ev and Luria — called their approach cultural-historical. History was important for them as a foundation of a new kind of human science. (p. 47, emphasis added)

Therefore, I argue the role that time plays should not only be valued or analyzed retrospectively, but also proactively. In other words, why not reflect and utilize the power of historicity in an activity system, the basic unit of analysis, by including time as an active element contributing and shaping an activity as it happens? The *now* is being shaped as we act, so why wait until it is *history* to consider its existence or analyze its impact?

Finally, I also believe Engeström’s arguments support the importance of the environment as a whole—not just time. When he discusses expanding our understanding of CHAT, Engeström highlights the need to incorporate “other activity systems” (Lektorsky, 2009) when analyzing human activity. He identifies five principles that define the theory, among which is “the multi-voicedness of activity systems”. He explains, “the activity system itself carries multiple layers and strands of history engraved in its artifacts, rules and conventions” (2001, p. 136). These multi-voiced activity systems are a representation of the environment that surrounds the activity. If they are seen as an important factor to understand the current activity, why not account for their existence within an activity system?

#### 2.2.4.4 Defining the environment

After I convinced my inner critic (and I hope you as well) that adding the environment to an activity system model does make sense theoretically, I was up for another round of battles: what does the environment mean in an activity system? What is its scope? How can I explain it in clear terms to others? To answer these questions, I draw on CHAT's principles of historicity and development and on its emphasis on the *cultural historical* aspects of activity:

There is significance in each word in the label *cultural-historical activity theory*. Cultural points to the premise that humans are enculturated, and everything people do is shaped by and draws upon their cultural values and resources. The term *historical* is used together with *cultural* to indicate that since cultures are grounded in histories and evolve over time, therefore analyses of what people do at any point in time must be viewed in light of the historical trajectories in which their actions take place (Foot, 2014, p. 330, emphasis in original)

In a general sense, I should begin by asserting the multidimensional nature of the *environment* element. An environment in an activity system should account for both *space* and *time* in a general and specific sense. As is the case with many aspects of an activity, the environment should be seen multi-layered, with each layer affecting and shaping the activity in its own way. Or, maybe more accurately, the environment can be seen as a series of immediate – distant levels for both aspects, time and space; different levels or

layers can have greater or more active involvement during an activity than others.

#### 2.2.4.4.1 Time

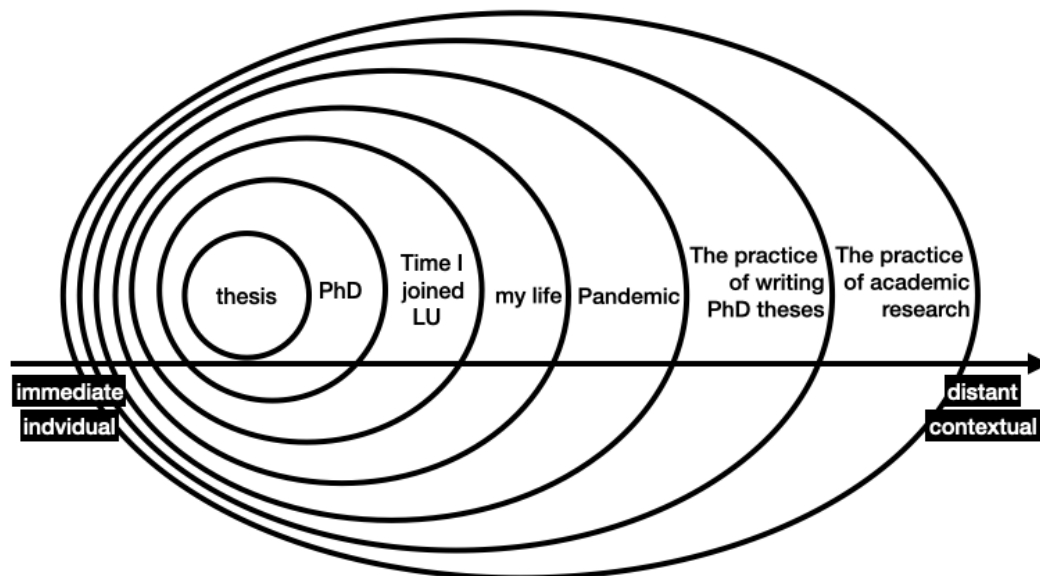
Starting with *time*, Engeström (2001) notes “the activity system itself carries *multiple layers and strands of history* engraved in its artifacts, rules and conventions” (p. 136, emphasis added). Rogoff (2003) also points out:

Development over the life span is inherently involved with historical developments of both the species and cultural communities, developments that occur in everyday moment-by-moment learning opportunities. Development occurs in *different time frames*—at the pace of species change, community historical change, individual lifetimes, and individual learning moments” (p. 51, emphasis added).

Different time frames define the development of human activity and can be reflected, as she notes, in daily activities and can be extended to lifetimes. It’s not one instance or the other, rather a combination with varying degrees of impact. For example, if we go back to the activity of PhD research as an example, *time* covers many layers ranging from individual/immediate to contextual/distant: the amount *and* kind of time it took to produce the thesis, the time I joined the TEL program (and hence the kind of rules affecting my thesis), the life phase I’m in as I write my thesis, and the decade that hosts this activity (which includes the pandemic); see Figure 2.5. As well, I added the circles of *the practice of writing PhD theses* and *the practice of academic research* because these are historical concepts that are bound by/change

over time; they are defined by their place in time. I base this conclusion on Engeström (2001) who maintains: “history itself needs to be studied as local history of the activity and its objects, and as *history of the theoretical ideas and tools that have shaped the activity*” (pp. 136-137, emphasis added). Each one of these layers on the time scale shapes and affects the activity of writing the thesis in so many ways, and the activity of writing the thesis has restricted and enabled these different phases in several ways as well, most clearly is its restraining effect on the “my life” slice for example.

**Figure 2.5 The temporal aspects defining the environment of the PhD research activity**



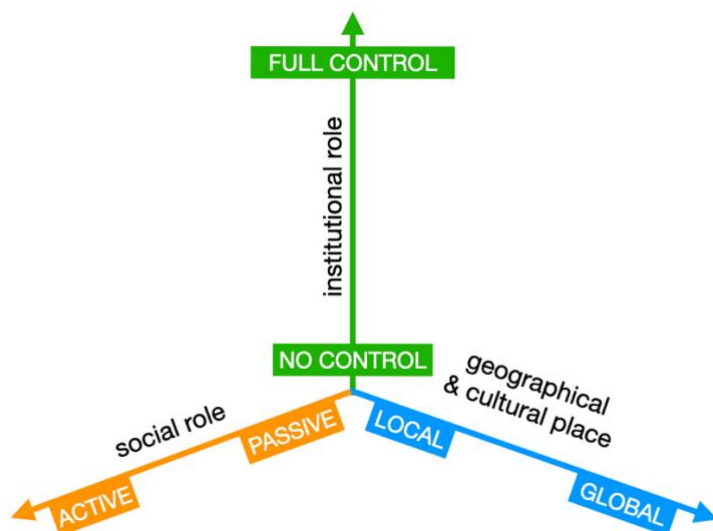
Another way to picture these different layers is on a micro-macro scale, ranging from the micro “relatively discrete slices” of time “with clear-cut beginnings and ends, dictated by given goals or tasks” to the macro kind of time where one accounts for the “longitudinal-historical aspects” of an activity to properly situate it within its context (Engeström, 1999, p. 22). The macro

end of the time scale, I propose, should reflect the history of the activity, which should allow for incorporating “the past cycles of the activity system” (ibid.) in the analysis of activity in its current form. This should encourage researchers to account for the effects of these past activities, which Engeström (1999) believes to be important for facilitating “the different viewpoints and approaches of the various participants” (p. 22) in an activity over time. Surely, historicity should account for both local and global levels.

#### 2.2.4.4.2 Space

If we consider the *space* hosting an activity, the environment can be seen as represented by 3 dimensions: a). geographical/cultural place, b). institutional entity, and c). social role, all which define the capabilities that shape an activity. These 3 dimensions also define the kind of effect the outcome of the activity will have on the environment. Figure 2.6 is a working rough draft of how I picture the space aspect of the environment.

**Figure 2.6 The special dimensions that shape the spatial environment**



To begin with the most obvious, the geographical and cultural environment represents the geographical place and cultural circle, if this makes sense. Being a Syrian who grew up in a multicultural community in the UAE, I am beyond confident that the place where you live, the place to which you belong, and the place that you represent (i.e., the place others use to stereotypically define you before you utter a word) can be three completely different places (and can lead to major identity issues, but that is for another thesis). This is to say that people who *belong* to a certain *geographical place* but are *situated* in another place do not necessarily fully embody the *culture* of either places; but rather, as they attempt to assimilate into the foreign culture, they renegotiate a lot of their cultural inheritance and form a third culture that is an odd and unique combination of both. The beauty of this combination is that it is unique to each and every individual, even in the same household, depending on many variables that are unique to each individual *and* their encounters with the place they belong to and the place they live in. This understanding can be summarized by Maxwell (2012) belief that “a culture is a system of individuals’ conceptual/meaningful structures (minds) found in a given social system, and is not intrinsically shared, but participated in” (p. 28). Living in a multicultural environment that is situated in a culturally-sensitive area, I can write a whole paper explicating the possible variations and the unique factors that shape them, but it is beyond the scope (and word count) of this thesis, sadly. To relate this environmental dimension to the running example of my PhD research activity, the geographical and cultural location of the activity is unique. Culturally speaking, in my case, there is a combination of local and international cultures: my activity is defined by the thesis culture appropriated



uniquely in the UK, *and* governed, ultimately for me, by the culture of PhD accreditation in the countries in which I aim to work, for example.

Geographically speaking, living abroad, my activity is also a combination of local and international geographical circles which affect many elements, including the financial costs (rules) of the activity, the prestige of the outcome, and the network of connections I can build during this journey. Put differently, if I were to embark on the same PhD journey but with a different geographical/cultural environment, I am confident that different kinds and intensities of tensions and development trajectories will evolve over the course of the activity solely due to the different geography and culture of the participating environments.

Second, the institutional entity refers to the *role* played by the immediate environment that hosts the activity. I believe this role is crucial when it comes to defining the kind of capabilities allotted to the activity and the members within it, both of which drastically differ from one entity to another. This role also defines how impactful the outcomes of an activity are on other activity systems and on future iterations of the activity itself. Different institutions offer different capabilities and create different challenges for activities happening within them. Going back to the activity of PhD research, and at the risk of sounding biased, I believe having started my PhD research at Lancaster University has given me a wide range of capabilities that I would not have had access to otherwise, including the valuable experiences of the instructors, the

generous and much-needed support of Alice Jesmont<sup>4</sup>, and other capabilities. Being at this institution, in my case, also comes with a set of challenges: limited access to the campus, financial costs, accreditation demands, and others. Of course, these capabilities and challenges would differ drastically had I joined another *institutional entity*.

Finally, the *social role* of the subject is the final most micro element of the space aspect, and I have struggled with defining this aspect to my circle of critics (mentioned below). Nonetheless, I see this dimension reflecting authority/power and the impact of the individuals leading the activity. The question I got was: isn't this more related to the *subject* than to the *environment*? I would say the subject is heavily affected by it and produced somehow from it, but it is defined by the environment, and its range is heavily dependent on the environment. Using the example of PhD research, my social role is a student and early-career researcher at LU and an instructor at the research site. Being an instructor at the research site means that I have limited access to participants as compared to other leadership roles at the institute. My role as a student and early-career researcher compromises the level of authority and impact I have when I publish this research. This is not to say that I cannot achieve a desirable impact, but it would require a different level and intensity of artifacts, division of labor, and actions to make it happen.

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<sup>4</sup> Alice Jesmont is the tireless program coordinator for my PhD program. Her door is always open, and her support is endless.

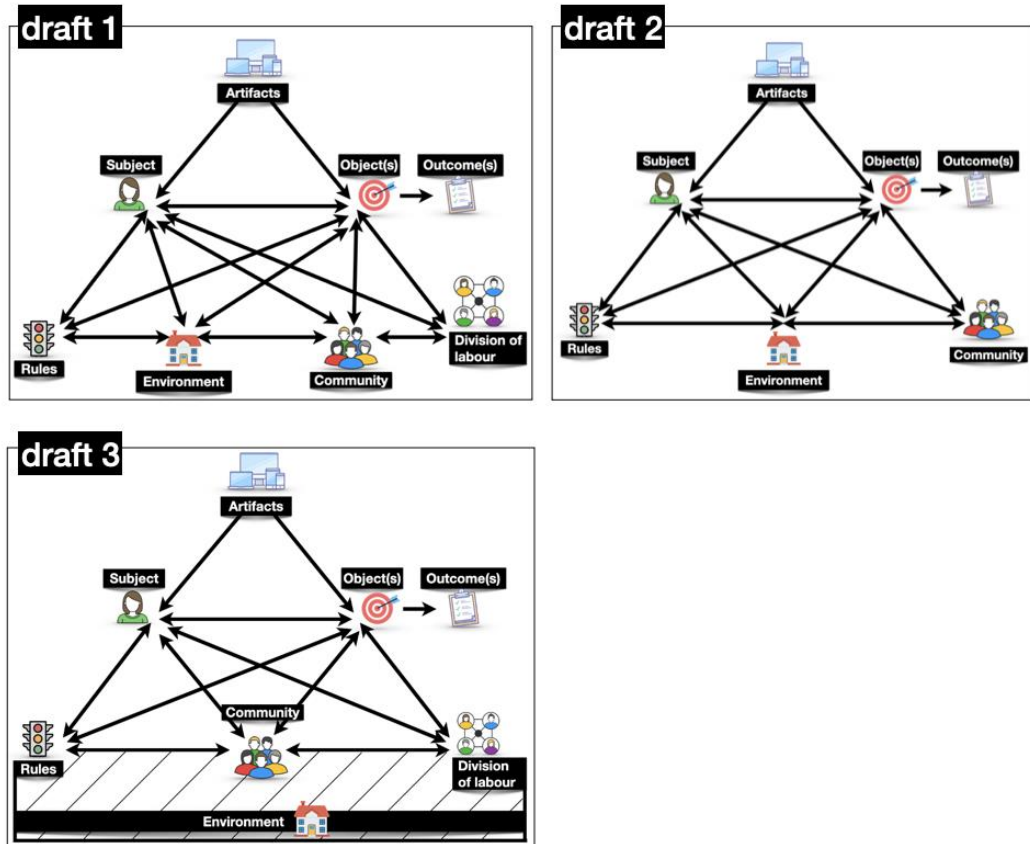
Another, probably clearer example of the effect of *social role* on an activity, can be seen at a random social event. An activity led by a *parent* at a social event is different in terms of authority and impact from that led by a *teenager* at the same event. The difference can be seen in the impact these activities have and the degree of authority they claim. I think with these two examples I can restate my claim that not all environmental aspects will always be as impactful or as defining in all activities; some aspects will be more powerful than others in terms of shaping and defining the dynamics and the outcomes of an activity.

#### **2.2.4.5 Placing the environment**

As I was renegotiating the concept, I was also struggling with the idea of how can the environment element be added to Engeström's model? While the answer was partly dictated by visual appeal, it was mainly answering another crucial question: which elements in an activity system are directly affected by and/or in contact with the environment? I am still not sure I arrived at the perfect or ideal answer. I tried different iterations (see Figure 2.7) and discussed each with my economist/lawyer-to-be sister Eman, my colleagues (soon to be Dr.'s) Rob Miles and Reem Badwawi, my supervisor Dr. Julie-Ann Sime, and a mathematician colleague Dr. Azar Salami. Each one of them had a different yet relevant background which gave me the opportunity to examine my proposition from as many relevant angles as I can. As I tried to explain and make the argument for adding the environment, their questions and "yes, but" / "yes, and" insights solidified my belief that CHAT needs an update that accounts for the environment. These discussions also helped me reach a

model reconfiguration that I feel confident to present, but not confident enough to claim I am done with it.

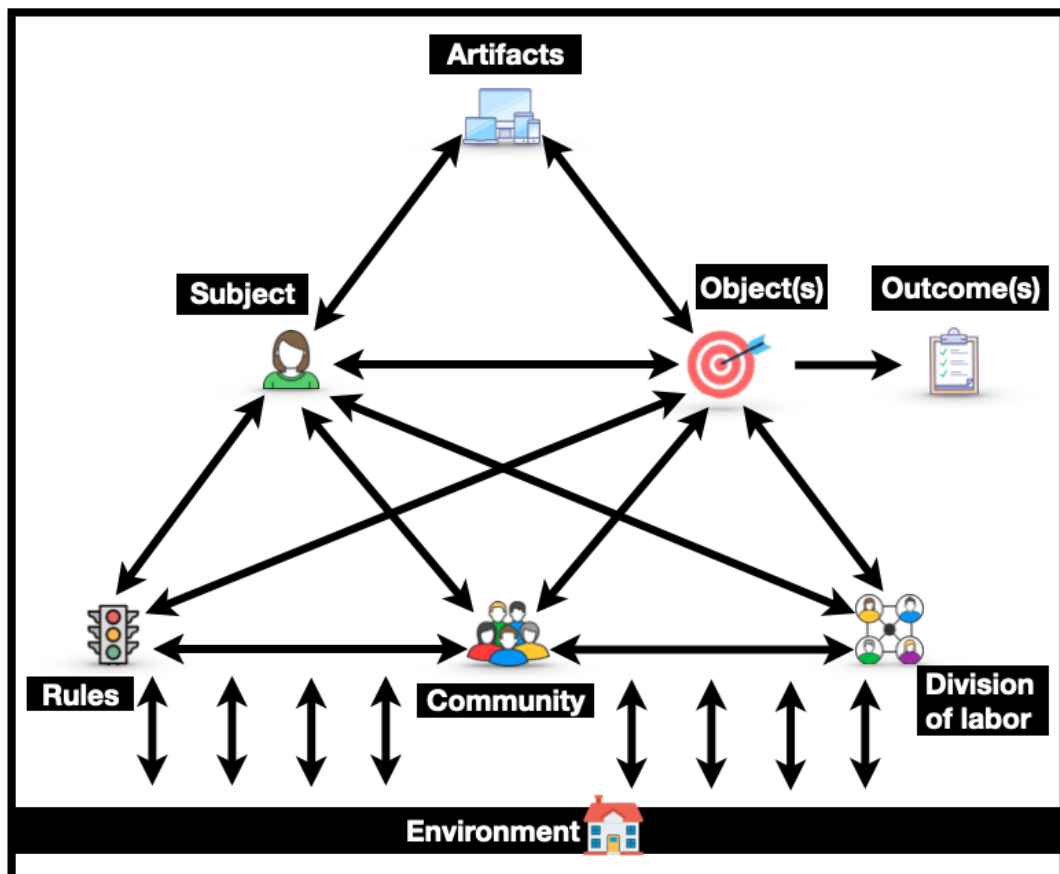
**Figure 2.7 Earlier drafts of the suggested activity system model**



I would have loved to bore you with the details of these early attempts and why I first thought they were suitable but then believed they were not—this journey highlights how the concept developed—but wordcount does not allow for it. Nonetheless, I should highlight why the last one I reached, so far, is the way it is. Figure 2.8 displays the final, for now, suggested model that accounts for the environment—the frame is not for decorative reasons; it is in fact considered a part of the model. Surely, this is still a work in progress (not fully

satisfied with the visual aspect), but the reason I propose adding the environment this way can be explained from three different perspectives.

**Figure 2.8 An activity system model that accounts for the environment as an active element**



Firstly, the reason the environment starts from the base of the activity is because I see the activity as a product growing out of the environment. The activity in its current form is based on previous iterations of it in the environment; it's *built* on it. Similarly, the weight of the activity, figuratively speaking, leaves an impact that reshapes the environment for future forms of the activity—"activities from the past are alive in the present and also help

shape the future” (Gay & Hembrooke, 2004, p. 10). This is why I added the double-sided arrows at the bottom.

Secondly, while the environment’s effect is seen on the activity itself as a whole (hence the frame surrounding the whole triangle), I believe its impact can be mostly seen on the social dimension of an activity, the lower half. That is, with this placement, the community, rules, and division of labor can be rightfully seen *immersed* in the environment that is shaping and contributing to the activity. This is why I labeled it at the bottom.

Finally, at first, I was against the idea of adding the environment as a frame (circular or rectangular) surrounding the activity, although it might seem appropriate, because I believe such configuration can easily dismiss the environment as an unnecessary force, passively looming in the background, as it has been thus far. Put differently, adding the environment as a frame *around* the activity could suggest the absence of its role *within* an activity and could underestimate its active role before, during, and after an activity.

However, when I presented iteration 3 to my colleagues, where the environment was lurking at the bottom, they felt it was out of place; “it looks weird/off” they mercilessly said. And those who were not familiar with the details of CHAT constantly asked: “but doesn’t the environment affect the subject, artifacts, and the object too? Why are you just displaying its effect on these three elements only?” There are ways to argue back, but I believe it makes more sense to directly show that the environment is in fact affecting all elements within an activity, with an emphasis on the lower half.

#### 2.2.4.6 Analyzing the environment

Now that I've defined the environment and placed it in the model, I would like to highlight one last important issue pertaining to how the concept of *environment* can be utilized for analysis purposes. Failing to highlight this point, as I see it, defeats the point of adding it to the model. As a researcher, seeing how I can ask for information about an element helps me better conceptualize it and ensures that I a). include it in my data collection attempts and b). account for its tensions and contributions in my analysis. For other activity system elements, Mwanza (2001) suggests an eight-step model that provides researchers with questions to inquire about each element in the system without necessarily expecting an understanding of the theory from the interviewee. For example, they suggest when asking about *division of labor*, one should ask: "Who is responsible for what, when carrying out this activity and how are the roles organised?" (p. 6). My understanding of Mwanza's model supported by Marken's (2006) adaption of it in non-theoretical terms have informed my approach to formulating relevant and suitable questions for inquiring about the environment.

The way I understand it, the environment will always be different for different activities because the term (and its associated aspects) is a loaded concept that carries within and reflects individuals' and the community's appropriation of these concepts. So, how can I invite a participant (who could be the *subject* or could be a *community* member) to share their understanding of both time and space in relation to the activity? These are some questions that I think

might encourage the subjects and the researcher to reflect on the environmental elements shaping and contributing to the activity in question:

- What elements or features about the current environment (both time and space) do you find most affecting the activity?
- In what ways do you find the environment (both time and space) limiting or enabling the activity or your actions in the activity?
- How would the activity or your actions be different in a different place or time?

### **2.3 CHAT and critical realism**

Before delving into the research background in the next chapter, it could be useful to explain how CHAT aligns to my critical realist stand. Sharing this explanation, I hope, should make my approach to using the theory for data collection and data analysis more transparent. Firstly, as discussed, critical realism encourages social researchers, as May (2011) explains, “not simply to collect observations on the social world, but to explain these within theoretical frameworks which examine the underlying mechanisms that inform people’s actions and prevent their choices from reaching fruition” (p. 12). As a critical realist, I acknowledge that, sometimes, these underlying mechanisms cannot be observed, but their existence can be deduced “by reference to observable effects which can only be explained as the products of such entities” (Sayer, 2000, p. 12). Hence, to make valid interpretations and conclusions about the phenomenon, a critical realist is encouraged to collect *rich data* that “are



detailed and varied enough that they provide a fuller and more revealing picture of what is going on, and of the processes involved” (Maxwell, 2012, p. 43). This is one of the very important reasons I find CHAT a very suitable framework to collect such rich data as it allows me to investigate all the elements involved in an activity.

Additionally, I appreciate that Vygotsky perceives reality as “the *outcome* of our *culturally forged modes of conceptualization* as they organize and structure the deliverances of experience” (Bakhurst, 2007, p. 61, emphasis added). Leontiev (1978) also defined activity as serving “the function of entrusting the subject to an *objective reality* and transforming this reality into a *form of subjectivity*” (p. 41, emphasis added). Not to sound like a diehard critical realist, but this statement is music to my ears as I believe in the existence of a reality that we can only attempt to understand; and our understanding of reality (i.e., not reality itself) is a product of our own interpretations and experiences of it; an understanding that differs from one person to another in varying degrees. I find Maxwell’s (2012) elaboration on this well-put:

While critical realism rejects the idea of ‘multiple realities,’ in the sense of independent and incommensurable worlds that are socially constructed by different individuals or societies, it is quite compatible with the idea that there are different *valid perspectives* on reality. (p. 9, emphasis in original)

I also agree with Vygotsky's notion of 'truth' being "simply a compliment we pay to views currently accepted within the community" (Bakhurst, 2007, p. 61). These views do not necessarily reflect the actual state of reality that stands on its own regardless of how we view it or interpret it. —It is an added bonus that Bakhurst (2007) suggests that Vygotsky was indeed a realist who "never lost confidence in the idea that those objects are independent of our forms of understanding them" (p. 67).

In addition to finding Vygotsky's understanding of reality in line with my beliefs, I also found that the theory accommodates my beliefs about reality and my understanding of it. Bligh and Flood (2017) summarize Activity Theory's stance on reality:

Fundamentally, activity is conceived as the relationship between the 'subjective' and the 'objective' *within a single reality*. That reality is presumed to *exist prior to individual human experience, to be socially and culturally produced*, and to be immensely dynamic notwithstanding *apparent stability or regularity* (p. 129, emphasis added).

This view of reality, as previously discussed, aligns very well with the critical realism stance I adopt.

Finally, I also see CHAT's acknowledgement of historicity and development congruent with my critical realist understanding that, as Maxwell (2012) confirms, "individuals' physical contexts have a causal influence on their beliefs and perspectives" (p. 20). As a researcher, I seek to identify how the

environment and/or events taking place in it affect individuals' beliefs, decisions, and actions.

## **2.4 Summary**

This chapter explored the theoretical foundation of the study. I hope it has achieved the aim of providing the reader with the needed theoretical background for the study, highlighting the important principles framing the study, and establishing the grounds for adding *the environment* as an important element when analyzing an activity system. With this foundation in mind, it seems logical that I delve into the research problem itself and begin by providing a clear picture of the background shaping this problem.

### **Chapter 3: Research background**

Ellis and Levy (2008) identify two main factors to consider when defining a “research-worthy problem” (p. 22). One being “the current state differs from the ideal state” and the absence of a viable solution for this issue. This is why I find it important to share how the pandemic has rendered the whole world, including the UAE, in a state of chaos and unrest and how that led to a much less ideal state of teaching and learning. As well, this study is based on a critical realist stance (see Chapter 1); this means an awareness of the environment and circumstances that surround participants in this study is required. This study is also guided by CHAT (see Chapter 2). CHAT foregrounds the need for comprehensively looking at human activity as a product of cultural and historical factors that led to its current state, one way or another. This requires that one takes into account the environment, both space and time, when analyzing human activity. Also, given how each country has uniquely experienced *and* responded to Covid-19, I believe it is crucial to paint a clear picture detailing the unique contextual circumstances that have shaped the participants’ world and in turn their activity.

In this chapter, I share the global response to the coronavirus and then share the UAE’s experience. While this account might seem detailed or beyond the educational scope of the study, these non-educational details have shaped the environment in which this activity took place, affecting the teachers (the subject), the rules shaping the activity, and the community participating in the activity. The details below should allow the reader to a). gain a better understanding of how this context has handled and has been shaped by the

pandemic and b). properly situate the activity of TDP at the institute in the UAE. I conclude the chapter with a statement of the research issue at hand.

### 3.1 Once upon a time

On March 11<sup>th</sup>, 2020, the World Health Organization (WHO) announced that the outbreak of the coronavirus (Covid-19) around the world has been fast, severe, and global enough to be considered an international pandemic (see Figure 3.1). Considered late by some (Analytica, 2020; Green, 2020), this tweet marked the beginning of an odd, nearly cinematic life for humankind, or as many worry/hope: the end of life as we know it.

**Figure 3.1 WHO tweet declaring Covid-19 is a pandemic**



Being categorized as a *pandemic*, Covid-19 cannot be easily dismissed because “the virus is displaying sustained person-to-person spread, is causing illness and death, and has worldwide spread” (Analytica, 2020). As a

result, many changes were enforced by governments around the world to control the spread of the virus and to ensure lives are saved: airports were shut (Leggett, 2020; Skirka, 2020), countries went into lockdowns ("Coronavirus lockdown," 2020), places of worship closed their doors (Afp, 2020; Daniel Burke, 2020), and educational institutes made immediate drastic changes to cope with distancing needs (UNESCO, 2020).

### **3.2 The plot thickens**

With no cure in sight, “preventive measures are the current strategy to limit the spread of cases” (Güner et al., 2020). Hashtags like #stayHome, #flattenTheCurve, and #socialDisntancing quickly started trending almost everywhere (Stewart, 2020). People in many countries were encouraged (and in some required) to wear a mask covering their face in public or at least in crowded places and to avoid close contact with others. In some countries, the public was asked to refrain from leaving their homes unnecessarily (how this *necessity* is defined has also differed from one country/lockdown to another). At the time of writing this chapter (June 2020), the UAE government, as an example, has recently shared an updated list of Covid-19-related and never-imagined violations with fines reaching up to AED 20,000 (GBP 4000), per violation (Abu Dhabi Government Media Office, 2020)—see Figure 3.2.

**Figure 3.2 UAE mandated violations to prevent Covid-19 spread (source: Twitter/@admediaoffice); 1 GBP is around 5 AED.**

**Updated Schedule of violations and fines**
3

**Based on decision No (38) of 2020, issued by the Attorney General, and amendments of the same decision, to curb the spread of the novel Coronavirus**

<p><b>9</b> <b>Violation of provisions related to burying or transporting bodies of infected individuals</b></p> <p><b>A fine of AED 5000</b></p> <p>for violating the provisions of the Executive Regulations of the Communicable Diseases Law when burying or transporting the body of a deceased individual infected with communicable diseases</p>	<p><b>A fine of AED 500</b></p> <p>issued for the employee or worker</p>
<p><b>10</b> <b>Violation of exceeding the allowed number of passengers per vehicle</b></p> <p><b>A fine of AED 3000</b></p> <p>issued to any driver with more than three people in one car (i.e. one driver and two passengers). (Excluded from this are members of the same family or second-degree relatives.)</p> <p><b>A fine of AED 5000</b></p> <p>and vehicle impounding for a month, for any driver using a vehicle to transport goods, objects, or other items that contravene the authorised purpose and for doing so in violation of health and safety regulations</p>	<p><b>A fine of AED 3000</b></p> <p>issued for failing to maintain social distancing</p> <p><b>A fine of AED 5000</b></p> <p>issued for the owner of the shopping centre, commercial outlet or other establishment for failing to take the necessary measures to observe social distancing, or allowing overcrowding and assembling inside these establishments, including cafes, restaurants, beaches, gyms, public swimming pools, hotel pools or others under their custodianship</p> <p><b>A fine of AED 3000</b></p> <p>for violating preventative measures for persons issued by the concerned authorities in the Emirates, including while exercising or taking part in sports or recreational activities in open places or hotel beaches, and when walking or gathering in gardens or public parks</p>
<p><b>11</b> <b>Violations of not wearing masks or failure to observe social distancing</b></p> <p><b>Violation of not wearing medical or cloth masks or veils in the following cases</b></p> <p><b>A fine of AED 3000</b></p> <p>when visiting closed public places or shopping centres, and while using public transportation</p> <p><b>A fine of AED 3000</b></p> <p>when walking around or being in public spaces that are crowded or are high traffic areas</p> <p><b>A fine of AED 3000</b></p> <p>for being in private vehicles with two or more passengers (i.e. the driver of the vehicle and one or more passengers)</p> <p><b>A fine of AED 5000</b></p> <p>issued for the employer and owner of the company, establishment or workplace, including workers' accommodation</p>	<p><b>A fine of AED 3000</b></p> <p>issued for the owner of the company or establishment for failing to comply with maximum capacity rates for the number of employees allowed inside a facility, commercial establishment or company workplace</p> <p><b>12</b> <b>Violation of not sterilising means of transport</b></p> <p><b>A fine of AED 5000</b></p> <p>issued for the manager of the company or establishment for failing to carry out sterilisation procedures in public and private transport (including taxis)</p> <p><b>13</b> <b>Violation of frequenting healthcare facilities other than at prearranged times</b></p> <p><b>A fine of AED 1000</b></p> <p>for visiting a healthcare facility other than at a prearranged time, or for unnecessary situations</p>

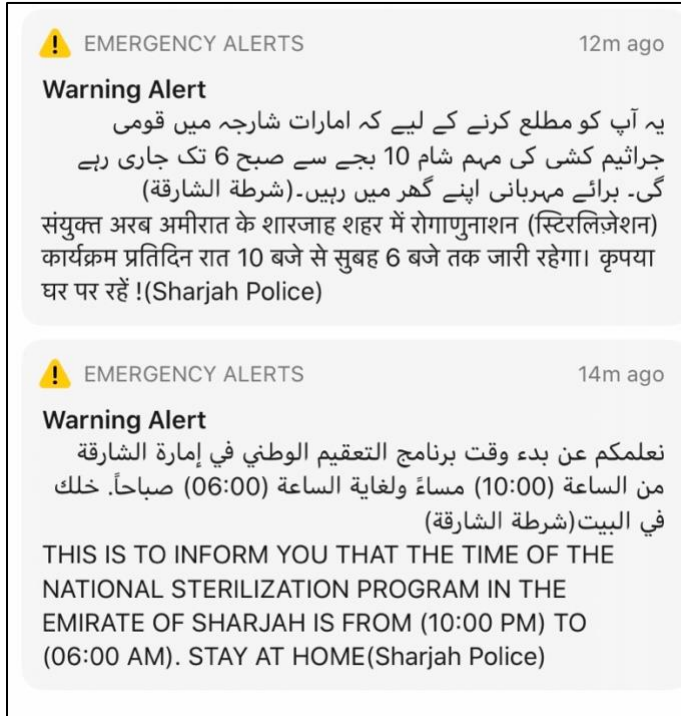
@admediaoffice

### 3.2.1 The UAE

In some countries like the UAE, a lockdown was put in place, or as the UAE called it: *the national disinfection program* (Bashir, 2020; Duncan & Sanderson, 2020). This program was initiated on March 26<sup>th</sup> and required people across the country to stay at home from 8 PM to 6 AM, with timings changing during following months. Exceptions were made for necessities and

essential workers. At the time of writing this chapter, timings have been eased to start at 10 PM, two hours later than previous iterations. At around 9:40 every day, everyone's phone around the country rings announcing an emergency alert in 4 languages (see Figure 3.3). One can argue that silencing this alarm has become part of our well-engraved Covid-19 daily routines. My 5-year-old niece said once, "it's the message from the virus" when I asked her about the sound her mom's phone made.

**Figure 3.3 Emergency alerts sent out on a daily basis**



During the national sanitization hours, "shops selling essential goods including supermarkets and pharmacies were granted permission to operate 24-hours a day" (Duncan & Sanderson, 2020) as the government disinfected "public and private facilities, streets, public transportation, metro trains and trams" (Bashir, 2020). Surely, the program was not implemented all at once. It was first



announced to be for a weekend, and before the weekend ended, it was extended “until further notice”. (Ministry of Interior, 2020; Mohamed, 2020).

### **3.3 Education at the beginning of Covid-19**

Although countries started to gradually ease Covid-19-mandated measures in June 2020 (Katz, 2020), the topic of opening schools and universities or resuming on-campus lessons has been, since day 1 of declaring the pandemic, a highly-debated issue, with different countries handling the issue differently, and with no clear (announced) plan for the 2020-2021 academic year until weeks prior to the start of classes. A UNICEF report in April 2020 cautioned, “while we do not yet have enough evidence to measure the effect of school closures on the risk of disease transmission, the adverse effects of school closures on children’s safety, wellbeing and learning are well documented” (UNICEF, 2020, p. 1).

#### **3.3.1 The UAE**

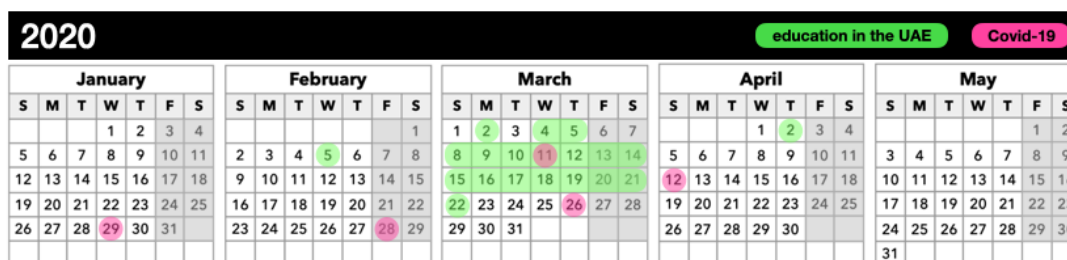
This case study investigates the practice of teaching at a higher education in the UAE. Hence, this section is dedicated to delineating how the education sector was affected by the pandemic in the country, and there is no better way to start than to share how the vice president and prime minister of the country (see Figure 3.4) described the aftermath of the pandemic: the country is getting ready for a “post-Covid-19” era that “will never be the same.”

**Figure 3.4 A tweet about post-Covid-19 norms by the vice president and prime minister of the UAE (Al Maktoum, 2020)**



Figure 3.5 summarizes the most important Covid-19 events in the country (Bashir & Alfaham, 2020; Duncan & Gautam, 2020; Ministry of Education, 2020a, 2020b, 2020c, 2020d, 2020e, 2020f; Ministry of Interior, 2020; Reynolds, 2020; Rizvi, 2020). As can be seen in the figure, the country took the virus as a serious issue that requires immediate action, even before the pandemic status was announced. The first Monday after the first quarantine case in the country, the Ministry of Education announced that all government educational institutes “will initiate on Wednesday and Thursday [March 4 and 5] the pilot stage of a distance learning initiative” immediately (Ministry of Education, 2020d, para. 1). Shared on March 2<sup>nd</sup>, the announcement did not allow schools to set plans or offer training. Lacking preparation and training, students and teachers immediately delved into remote classes the next day and experienced remote teaching and learning for the first time, without any prior experience with this kind of environment. The spring break was strategically rescheduled to move up. It started right after this pilot phase.

**Figure 3.5 Important dates in the UAE during the early days of the pandemic**



The working week starts on Sunday. Fridays and Saturdays are weekends.

**JANUARY 2020**

- 29 first COVID19 case in the UAE

**FEBRUARY 2020**

- 5 Universities across the country sends advisory email to “be cautious and seek medical help should they develop a cough or fever, especially after travelling” (Rizvi, 2020, para. 1)
- 28 first quarantine in the capital of the UAE

**MARCH 2020**

- 2 MOE announces pilot phase of “distance learning initiative”
- 4 - 5 Pilot online classes

**MARCH 2020 —cont.**

- 11 WHO announces COVID19 is a *pandemic*
- 8 - 21 Spring break for students
- 8 - 14 Spring break for teachers
- 15 - 21 PD week for teachers
- 22 “Distance learning” started in the UAE
- 26 The *national sanitization program* started

**APRIL 2020**

- 2 Distance learning extended to the end of the semester
- 12 Drive-through testing centers launched across the country

- **MOE:** Ministry of Education
- **WHO:** World Health Organization

While students’ spring break was for two weeks, teachers across the country returned a week earlier than students to undergo an intensive professional development program organized by and delivered via the ministry, “making sure that teachers are skilled enough to deal with all distance learning tools most professionally” (Ministry of Education, 2020a, para. 4).

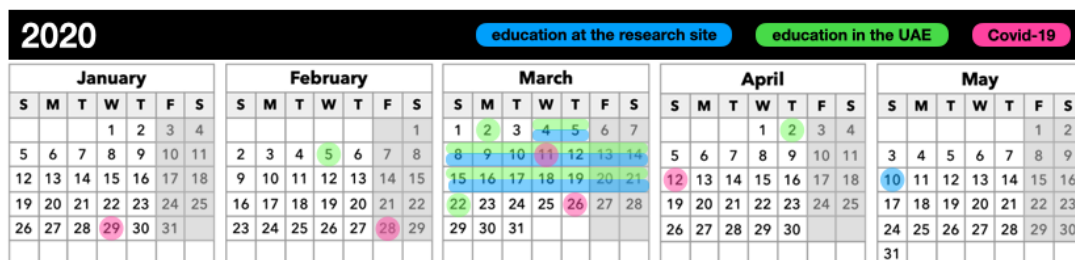
11 days after the pandemic was declared, “distance learning” started in the UAE, and was then extended till the end of the academic year. While the UAE was clear about its plan for the rest of the year, the world was still hotly debating whether or not schools should resume on campus, stay remote, or

completely close. An official spokeswoman announced, “education in the UAE is a priority and receives the support and follow-up of the UAE leadership, which continuously tracks the progress of the educational process to safeguard the future of students” (Ministry of Education, 2020b, para. 2).

### **3.3.2 Research site**

The research site is a public institution and has abided by changes happening in the country; nonetheless, it adapted some of these changes. One of the adaptations was the very early introduction of a quick training opportunity *before the pilot* started. The responsible teams managed to prepare and deliver immediate and sufficient basic and advanced sessions. Within less than 48 hours of announcing the country’s pilot phase and before the pilot remote classes started, faculty had access to two professional development (PD) sessions covering the basic skills needed to operate the system used to run remote classes. This institution-specific adaptation along others is seen in Figure 3.6.

**Figure 3.6 Important dates at the research site during the early days of the pandemic**



The working week starts on Sunday. Fridays and Saturdays are weekends.

**JANUARY 2020**

- 29 first COVID19 case in the UAE

**FEBRUARY 2020**

- 5 Universities across the country sends advisory email to “be cautious and seek medical help should they develop a cough or fever, especially after travelling” (Rizvi, 2020, para. 1)
- 28 first quarantine in the capital of the UAE

**MARCH 2020**

- 2 MOE announces pilot phase of “distance learning initiative”
- 4 - 5 Early PD sessions at the institute
- 4 - 5 Pilot online classes in the UAE and at the institute
- 11 WHO announces COVID19 is a *pandemic*

**MARCH 2020 —cont.**

- 8 - 21 Spring break for students
- 8 - 14 Spring break for teachers in the UAE
- 8 - 14 PD week for teachers at the institute
- 15 - 21 PD week for teachers in the UAE
- 15 - 21 Spring break for teachers at the institute
- 22 “Distance learning” started in the UAE
- 26 The *national sanitization program* started

**APRIL 2020**

- 2 Distance learning extended to the end of the semester
- 12 Drive-through testing centers launched across the country

**MAY 2020**

- 10 Last teaching day of Spring 2020 at the institute

- **MOE:** Ministry of Education
- **WHO:** World Health Organization
- **PD:** Professional development

Another main change was concerning teacher training after the pilot. The institute, unlike others in the country, ensured the early introduction of intensive training (PD week) for faculty before they went for their break, unlike other institutions. During this week, the institute offered professional development (PD) sessions, and teachers were encouraged to choose whichever sessions they felt were most relevant to them. As well, this training program was not delivered by government-appointed trainers; rather, it was

designed and delivered by the educational technology specialists at the institute, the edtech team.

The program offered the usual edtech-focused sessions in addition to new ones targeting the current state of affairs. The sessions counted towards the annual requirement of completing 40 hours of PD, and they were highly customized to cover technical skills and pedagogical skills based on a). the e-tools that were available at the institute, b). the nature of the academic programs and courses taught at the institute, and c). the desired outcomes set by management (and/or maybe requested by faculty). For example, offering courses that focused on *trackable* activities highlighted the institution's push towards making sure students' learning can be tracked in a quantifiable manner throughout the lesson. The effect of such focus, as will be discussed in the results, can be clearly seen on faculty's understanding of *effective* TDP practices.

### **3.3.3 The course**

Participants who were recruited for the study taught the same course, ABC101. This course is designed to improve students' English language skills given that English is the main language of instruction at the institute. Students who join ABC101 are first-year students who have failed to meet the required English language entry requirement; hence they are given conditional acceptance which allows them to take two general requirement courses and ABC101 (i.e., not more than 3 courses a semester). Students have one year to pass ABC101; if they pass the course, they are fully admitted into the

institution and can start taking degree-specific courses. If not, their acceptance is put on hold until they meet the language requirement via a nationally recognized language proficiency test or the internationally-recognized IELTS (International English Language Testing System exam). With this entry criteria to the course, students who join the course are female high school graduates who join the institute aiming to study in a four-year bachelor's program. A big percentage of new students (50-70% for the past 3 years) who enter the institute need to be admitted into ABC101, see Table 3.1.

**Table 3.1 Number of students who join ABC101**

Semester	ABC101 students at the research site	% of students joining the research site
Fall 2017	541	54%
Fall 2018	651	59%
Fall 2019	599	68%

While the main learning objective of the course (students improve their language skills) has always been the same, the way the course is offered to students has been subject to change over the last few years. Prior to the 2019-2020 academic year, students were not allowed to enroll in any other courses before passing ABC101. Having been allowed to join other courses while taking ABC101 in Fall 2019, students no longer view enrolling in ABC101 as a waste of their time. It also means that students can experience

the higher-education experience at a more satisfying level as they can now interact and learn along with other fully-admitted students.

As with other departments and courses, this course is taught by teachers from different nationalities and different professional backgrounds (i.e., teaching in other countries or at other institutes). However, they are all required to have at least 3 years of experience prior to joining the institute in addition to a degree or a recognized qualification that makes them eligible to teach English.

Teaching at an institute that prides itself on using the latest and most advanced technology in their classrooms, teachers are expected to be well-versed in the use of technology to facilitate teaching and learning, especially as all courses are laptop mediated. That is, teachers are expected to utilize laptops as the main medium of instruction through the use of the learning management system and other online learning and teaching tools.

### **3.4 Problem statement**

With all these local and global drastic changes taking place at what felt like the speed of light, this pandemic has had a very unique impact on education around the world and across all levels. Although this impact cannot be fully predicted yet, there still is a need, as Selwyn and Jandrić (2020) point out, to understand how this change was brought on, and maybe even, hopefully, contribute to shaping its progression. As Jandrić argues in his conversation with Selwyn:



The Covid-19 pandemic is a huge disruption to our way of life, yet it is also an *opportunity to challenge and hopefully improve the existing order of things*. It could be that the Covid-19 pandemic could also provide an *opportunity to develop a better and more just 'new normal'* (Selwyn & Jandrić, 2020, p. 1003, emphasis added).

This is what this thesis aims to accomplish: contribute to the development of a more effective teaching environment by gaining a better understanding of our current TDP practice and of ways it fell short or stood up to the challenge. This is done by conducting interviews with 12 language teachers at a higher education institute in the UAE where the pandemic has led to a unique situation shaped by:

- a). the drastic and immediate changes that were applied to the delivery mode (laptop-mediated and face-to-face -> completely online and remote), and
- b). the ramifications of dealing with a pandemic: constant changes, a lot of unknown, fear for one's health and safety, working from home, and other pandemic-related issues.

This unprecedented state of living and teaching highlights the need to critically document the changes teaching, as a practice, is going through in response to this unique environment. In this sense, this study aims to answer these questions:

1. How have teachers responded to the demands of teaching during a pandemic?
  - 1.1. What kind of *issues* have teachers faced as they engaged in TDP?
  - 1.2. What kind of *strategies* have teachers utilized to respond to Covid-driven changes and challenges?

A historically-situated understanding of these issues and solutions can paint a better picture of the impact the pandemic has had on the activity of teaching, and may hopefully direct the attention of policymakers and researchers to pertinent issues that require their attention.

### **3.5 Summary**

In this chapter, I provided a detailed account of the events that happened as a response to the pandemic, globally, in the UAE, and at the research institute. This account should, hopefully, provide the needed contextual and historical details to situate the issue at hand and to better understand the *atmosphere* shaping the activity. Before I explain how I chose to approach this issue, I think it is useful to take a close look at what other scholars, educators, and researchers around the world had to say or report about their contexts' responses to Covid-19.

## Chapter 4: Literature Review

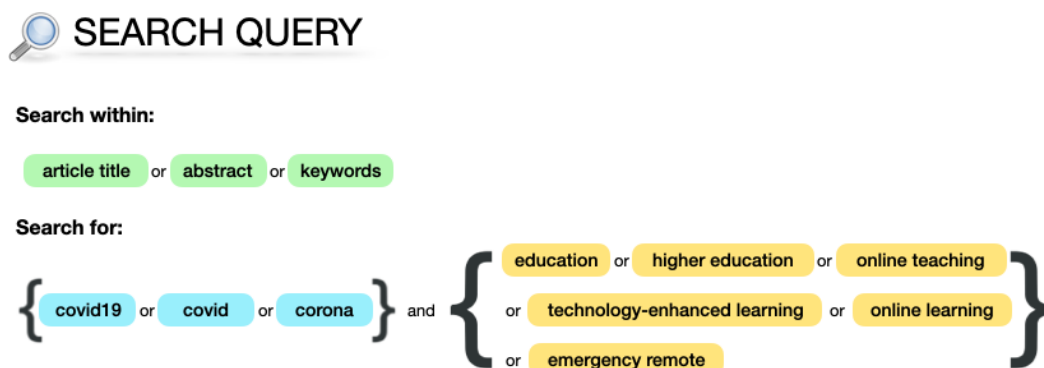
The thread of research or body of knowledge about the practice of remote teaching during a pandemic is still in its infancy, but researchers and educators have already engaged in various discussions in relation to the pandemic as “universities [and schools] *around the world* have been closed for instruction on campuses. Most are transitioning to online remote course instruction and learning for the semester” (Peters et al., 2020, p. 1, emphasis added). It is reasonable, therefore, to see the number of publications already skyrocketing, in ways that make it very difficult to conduct a comprehensive literature review of the topic for this thesis. Therefore, I had to adopt an unconventional strategy to conduct my review as is explained in the following subsection. Unlike traditional theses, the literature in this thesis did not inform the research design process or data collection approaches. These decisions were informed by the adopted theoretical perspective. Instead, the literature was utilized after data collection to create a backdrop against which I compare my findings and conclusions. The literature review also helped me identify the issues that were considered a primary concern for educators and researchers around the world and how they relate to my own data.

In this chapter, after I discuss my approach to identifying the sources, I define the term used to name the practice. Then, I identify the main issues, challenges, predictions, and recommendations reported and discussed in the literature. To conclude this review, I explore how the results and discussion of this study will contribute to these threads of research.

## 4.1 Situating the review

A reliable review of the literature should always account for the strategies used to search and to include sources in the review. From a CHAT perspective as well, sharing the process that led to the review is needed as a form of accounting for the historicity of the activity. To make this review feasible, I identified the publications (studies, viewpoints, and reviews) that were Scopus-indexed up until December 2020 using search terms based on my understanding of the issue at the time (see Figure 4.1). I found studies that were conducted in different environments (i.e., not only HE) and from different perspectives (i.e., not only teachers'). I decided to include all to avoid further limiting the pool of available sources. These publications formed the primary source of information reported in the review; they are not necessarily comprehensive, but they do paint a solid part of the global picture.

**Figure 4.1** The search query for the identifying relevant studies



Synthesizing and reporting the main findings in this chapter was informed by my research questions: issues and strategies. I soon found that strategies

were not commonly discussed in the pool of articles I had. This could be due to the fact that the efficacy of any adopted strategies was yet to be confirmed. To remedy this, I substituted *strategies* with a section about *predictions and recommendations*.

#### **4.2 Hi, my name is...**

Not surprisingly, one of the early debates regarding the educational response to the pandemic was about what it should be called, or more accurately what it should *not* be called. I chose to report it in this section, the literature review, because it is an issue that has had a bearing on the way I report the literature, not on my understanding of the issue or my approach to it. The issue was flagged as early as March 2020 by Hodges et al. (2020). They argue that the move to remote instruction in response to the pandemic is different from *online instruction* mainly because of the “unprecedented and staggering” (para 3) speed and scale of change required for the shift. As they discuss the differences, they rightfully caution that *online learning* will soon become “a politicized term that can take on any number of meanings” (para 4). They explain that, traditionally, the concept of *online learning* refers to a complex issue that involves many factors and yields so many different instructional variations. They maintain:

We need to recognize that everyone will be doing the best they can, trying to take just the essentials with them as they make a mad dash during the emergency. Thus, the distinction is important between the normal, everyday type of effective online instruction and that which we

are doing in a hurry with bare minimum resources and scant time:  
emergency remote teaching. (para 13)

#### 4.2.1 Emergency remote teaching?

Hodges et al. (2020) suggest naming the emerging practice *emergency remote teaching* and define it as “a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances” (para 14). They clearly identify its main purpose as: “not to re-create a robust educational ecosystem but rather to provide temporary access to instruction and instructional supports in a manner that is quick to set up and is reliably available during an emergency or crisis.”

Although I appreciate that the authors acknowledge the near impossibility of creating a *robust educational ecosystem* in such circumstances and that “everyone will be doing the best they can”, as a teacher who spent endless hours trying her best to identify the needs of a new form of learning and to *concurrently* transform her classes in ways that respond to these developing needs, I find this definition problematic. Phrases like *quick to set up* and *emergency* diminish the long hours and hard work that teachers, including my participants, poured into the process trying to figure out the best way to adapt and move forward without any guidance from researchers or practitioners.

Using their argument about online learning, I personally find the term *emergency* to be an equally loaded term that could be used as indicative of a lower quality of teaching—i.e., teachers are not trying hard enough. As well, as they elaborate on their definition, they add the possibility of a return to

normalcy (i.e., the kind of life we *were* accustomed to) after the pandemic. Although I might have believed it to be highly probable in March 2020, in March 2021, I strongly believe this pandemic-response will leave an everlasting impact on education (teaching, learning, testing); we cannot “return to that format once the crisis or emergency has abated” (para 14) regardless of how long the pandemic looms on the planet.

#### **4.2.2 Teaching during a pandemic**

I choose to replace *emergency* with *during a pandemic* as I believe this phrase adequately highlights the unique nature of the practice, without undermining (or making any judgments about) the form or quality of teaching provided in the process. When using the term *teaching during a pandemic*, I refer to a unique form of teaching that is a). framed by the demands primarily imposed by the pandemic, b). shaped by the needs of the pandemic-generated learning environment and c). subject to abrupt and frequent changes reflecting our changing understanding of the pandemic (the main cause).

In our case (Covid-19 pandemic), the nature of the pandemic has created the survival need for a *remote learning environment*. This is where I identify the subtle difference between this form of teaching and *online, distance* or pre-pandemic *remote* forms of teaching. The remoteness of teaching and learning during this pandemic was: a). not a choice and b). sudden and urgent. These two distinct features have created a whole new layer of meaning attached to *remote* teaching and learning as a cultural concept—a psychological *artifact*

that comes with its own set of *rules* and *division of labor*, requires that *subjects* acquire a certain set of skills, and is continuously redefined by the *environment* and our *understanding* of it.

Throughout this paper, I refer to the practice as *teaching during a pandemic* (TDP) as compared to teaching before the pandemic (TBP). That said, studies reported in this review utilized different terms to refer to the practice, including: emergency remote teaching, distance learning, online learning, e-learning and others. As long as they discuss the process of teaching and learning *during a pandemic*, for the sake of consistency, I will use TDP and remote teaching (in its unique pandemic sense), interchangeably, to report their findings.

### **4.3 Issues and challenges**

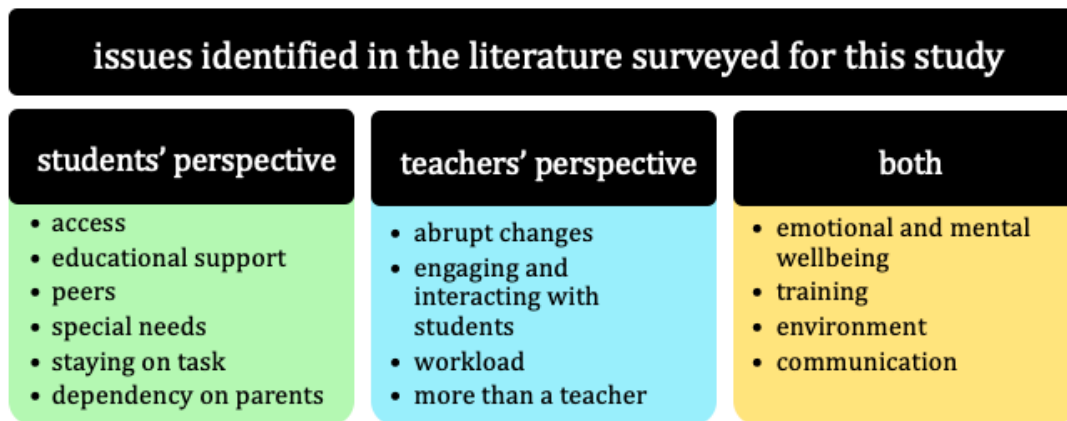
Although mostly associated with teachers and students, the teaching and learning process is a collective activity that includes many layers of the community whose involvement is dictated by different motives, perceptions, and responsibilities. Understanding how TDP has affected and has been affected by these different layers of the community, or as some researchers call them stakeholders (Janmaat et al., 2016; Wagner et al., 2008), is needed to properly situate the activity of teaching, something CHAT believes is much needed in any comprehensive analysis of the development of human activity.

Research looking into the pandemic and its effect on teaching and learning has surveyed these different players in different ways reporting a variety of issues and challenges. Upon reviewing studies, viewpoints, and reviews,



several issues were identified from the perspectives of students and their parents, and teachers. Findings are summarized in Figure 4.2; these issues will be discussed below.

**Figure 4.2 Issues and challenges identified in the surveyed literature**



#### 4.3.1 Abrupt changes

One of the salient issues that is frequently reported is the speed at which this drastic shift has happened. The immediate shift to a completely different delivery mode without sufficient training or enough time to plan left teachers with a daunting task (Adedoyin & Soykan, 2020; Bergdahl & Nouri, 2020; Cheema, 2020; Day et al., 2020; Espinosa Castro, 2020; Kraft et al., 2020; Niemi & Kousa, 2020; Tejedor et al., 2020; Trust & Whalen, 2020). Even with the existence of a digital aspect to teaching and learning prior to the pandemic, this background was “not sufficient during a pandemic outbreak” (Bergdahl & Nouri, 2020, p. 9).

Teachers were inundated with the urgent need to “intensely expand on their experiences and gather new skills” (ibid.) to make it work. Many studies

covering teachers' side of the story report how demanding TDP has been in terms of time and efforts needed to plan and prepare for lessons in the new environment (Adedoyin & Soykan, 2020; Aliyyah et al., 2020; Day et al., 2020; Espinosa Castro, 2020; Niemi & Kousa, 2020; Trust & Whalen, 2020; Vollbrecht et al., 2020). Day et al. (2020) give an example of the added load TDP has placed on teachers:

We all found that remote teaching can take much more time than face-to-face instruction. Despite the travel time saved by working from home, our workloads have increased. For example, e-mail volumes for Day increased approximately 50 percent compared with the same time in the previous year, and we have all participated in large numbers of virtual meetings. (p. 7)

The findings of Erfurth and Ridge (2020) reflect a similar volume of work:

“While the absence of breaks and adequate time to coordinate with others is one concern for both groups, the ‘huge amount of work in preparing and designing lessons and activities’ is another” (p. 5).

For students, this abrupt change left them astray without the support of their teachers, peers, or other support systems available on campus, and without sufficient training. This change also “unintentionally forced parents into new teaching roles as *proxy educators*” (Davis et al., 2020, p. 1, emphasis added). Both of these effects have led to a significant impact on students' support system and ability to cope out of class. Hence, these issues will be discussed

as separate issues of *access* (4.3.2) and *digital skills* (4.3.4) along with *the environment* (4.3.3).

#### **4.3.2 Access is not a given**

The *remote* aspect of teaching and learning during the pandemic has caused many challenges for students. Issues of access predominantly affected disadvantaged households, where access to reliable internet connections, modern devices, and tech support became limited as compared to the more accessible IT support on campus (Abuhammad, 2020; Adedoyin & Soykan, 2020; Aliyyah et al., 2020; Arnove, 2020; Baloran, 2020; Bergdahl & Nouri, 2020; Bhagat & Kim, 2020; Day et al., 2020; Erfurth & Ridge, 2020; Espinosa Castro, 2020; Hamilton et al., 2020; Lagi, 2020; Leacock & Warrican, 2020; Pham & Ho, 2020; Schwartzman, 2020; Shin & Hickey, 2020; UNESCO, UNICEF and the World Bank, 2020; Vollbrecht et al., 2020; W Zhang et al., 2020).

Students also lost access to the kind of support (educational or technical) that was more easily offered/accessed on school premises, and they were left dependent on family members who might not possess the needed skills for this new environment or for participating in the academic process (Abuhammad, 2020; Adedoyin & Soykan, 2020; Aliyyah et al., 2020; Espinosa Castro, 2020; Pham & Ho, 2020; Shim & Lee, 2020). Niemi and Kousa (2020) report the experience of students in Finland. Despite their general positive attitude towards the experience of learning during a pandemic, students found that “problems were more difficult to deal with without the presence of a

teacher” (p. 359). Peer support was also another inaccessible resource identified in the literature (Abuhammad, 2020; Day et al., 2020; Espinosa Castro, 2020; Niemi & Kousa, 2020; Shim & Lee, 2020), or as Espinosa Castro (2020) describes it, the lack of *collective*.

#### **4.3.3 Stranded out of class**

Another common issue reported in the literature examines the effect of the environment on the learning and teaching process. The change in environment was reported by many studies as both a positive shift (Dost et al., 2020; Niemi & Kousa, 2020; Shim & Lee, 2020) and a negative one (Adedoyin & Soykan, 2020; Aliyyah et al., 2020; Dost et al., 2020; Erfurth & Ridge, 2020; Espinosa Castro, 2020; Niemi & Kousa, 2020; Oyedotun, 2020; W Zhang et al., 2020).

Positive views appreciated the flexibility that comes with studying from home and saving time and costs of transport. Niemi and Kousa (2020) and Shim and Lee (2020) found students who appreciated studying remotely from home believed it was easier to participate in class discussions than they did previously. Studies that report the negative effect of the environment mention “families with more than one child attending school were further challenged because they needed to facilitate the learning of multiple children in often cramped spaces” (Espinosa Castro, 2020, p. 4). This shared space came with distractions and responsibilities that cannot be eliminated or ignored.

Some authors also point out the nature of some practical courses, where hands-on involvement is needed for courses like medical studies and

engineering, made it difficult for students to gain access to the full experience via online means (Adedoyin & Soykan, 2020; Day et al., 2020; Dost et al., 2020; Hamilton et al., 2020; Oyedotun, 2020; Shim & Lee, 2020).

#### **4.3.4 Digital skills**

Given the pivotal role technology plays in the remote aspect of TDP, many of the common issues highlighted by researchers concern the digital skills needed for making it happen, whether for students (Abuhammad, 2020; Adedoyin & Soykan, 2020; Aliyyah et al., 2020; Espinosa Castro, 2020; Lagi, 2020) or teachers (Aliyyah et al., 2020; Bergdahl & Nouri, 2020; Cheema, 2020; Lagi, 2020; Pham & Ho, 2020).

While only a few studies discuss prior training offered to students, Day et al. (2020) and others found that students who had prior experience with online learning “were better positioned to make the transition to remote learning” (Day et al., 2020, p. 6), suggesting that those who lacked this kind of experience were not as prepared for the experience. They also point out that students with previous experience did better at various tasks, including: concentrating on their courses, managing studying with other tasks, and staying motivated. Niemi and Kousa (2020) echo a similar observation, noting the importance of these skills for remote learning as they found students felt *self-management* was more difficult, and reported their struggle with motivation, focus, workload, asking for help, and lack of interaction.

#### **4.3.5 Ghost towns**

Engaging students and interacting with them was found to be as an issue of concern, especially in studies that report teachers' views and experiences (Aliyyah et al., 2020; Bhagat & Kim, 2020; Hamilton et al., 2020; Niemi & Kousa, 2020; Scull et al., 2020; Vollbrecht et al., 2020). They report difficulties keeping students engaged in class discussions or learning tasks. Studies that covered students' or parents' perspectives found the remote environment lacking in terms of engagement from peers (Day et al., 2020; Espinosa Castro, 2020; Niemi & Kousa, 2020; Shim & Lee, 2020) and lacking in terms of interaction with the teacher as they could not offer immediate and effective support (Arnove, 2020; Erfurth & Ridge, 2020; Espinosa Castro, 2020; Leacock & Warrican, 2020; Niemi & Kousa, 2020; Shim & Lee, 2020). In their survey of medical students, Dost et al. (2020) reveal that "overall, students did not find teaching to be engaging or enjoyable, with limited opportunities to ask questions" (p. 4).

#### **4.3.6 More than teaching**

Vollbrecht et al. (2020) share their experience with TDP and stress the need for including *support staff* whose task would be focused on handling and resolving any non-content issues students might face during the lesson, allowing the teacher to focus solely on the lesson itself. This increase in load was also evident in the need for teachers to go beyond their call of duty and provide other means of support for students and in some instances for their families (Espinosa Castro, 2020; Nolan, 2020; Vollbrecht et al., 2020).

Espinosa Castro (2020), for example, says “teachers had to dedicate extra time instructing families how to support their children’s learning, while some teachers had their own children at home” (p. 5).

#### **4.3.7 More than learning**

The mental and emotional wellbeing of students is a common concern reported by teachers and raised by researchers— “No matter how hard you try to fortify yourself with work and study, it is difficult not to feel vulnerable” (Ashfaquzzaman, 2020, p. 535). It is believed that many factors shaping the current environment have led individuals to feel emotionally drained and mentally exhausted (Ashfaquzzaman, 2020; Baloran, 2020; Boals & Banks, 2020; Davis et al., 2020; Day et al., 2020; Erfurth & Ridge, 2020; Espinosa Castro, 2020; Hamilton et al., 2020; O'Connor et al., 2020; Vollbrecht et al., 2020; Weis et al., 2020).

For students, they no longer interacted with their peers as they used to, and they were left with the burden of the demanding experience of remote learning with little or no previous training or experience. Boals and Banks (2020) explain, “the problem is that if these individuals are experiencing MW [mind wandering] about the pandemic, their ability to concentrate and get focused work done, regardless of how much free time they have, is going to be impaired” (p. 255). Bergdahl and Nouri (2020) add, “social aspects of learning may impact general well-being, and may be particularly important during social isolation” (p. 9).

Studies discussing teachers' wellbeing highlight several causes for their increasing stress levels (Boals & Banks, 2020; Erfurth & Ridge, 2020; Hamilton et al., 2020; Shin & Hickey, 2020; Trust & Whalen, 2020; Watermeyer et al., 2020). Erfurth and Ridge (2020) discuss four possible sources that have made the job more demanding and more stressful. They mention: time needed for preparing lessons *and* interacting with learners, lack of breaks throughout the day, and the added tasks that are created due to the need to work from home.

#### **4.3.8 The good?**

Finally, it is worth noting that some studies, especially those that highlighted students' perspectives, highlight some aspects of remote learning that were appreciated by students (Dost et al., 2020; Niemi & Kousa, 2020; Shim & Lee, 2020). In their analysis of their survey results, Shim and Lee (2020) identify 8 "areas of satisfaction" their surveyed students reported, among which many were environment-related. Oyedotun (2020) provides a number of benefits they concluded from "informal conversations with colleagues and students" (p. 2). These included viewing the transitions as an opportunity for "personal growth and development".

#### **4.4 Future predictions and recommendations**

Surely, the literature is not conclusive or comprehensive yet when it comes to offering strategies to address the challenges facing TDP. Educators and researchers around the world are still figuring their way around TDP, so as a way of moving this conversation forward, I chose to report on what



researchers, social scientists and educators have *recommended* and *predicted*; instead of possible solutions or remedial strategies for the identified issues.

#### **4.4.1 Learning loss**

One of the bleak forecasts concerns what many call *learning loss*: “it is notable, however, that recent studies have found that school closures from COVID-19 can lead to learning loss and widen the achievement gap even in high-income countries” (UNESCO, UNICEF and the World Bank, 2020, p. 19). This loss is attributed to different reasons: school closure (UNESCO, UNICEF and the World Bank, 2020), disparity in access to resources due to socioeconomic reasons (Schwartzman, 2020; UNESCO, UNICEF and the World Bank, 2020), and various circumstances affecting the quality of learning happening in classes during the pandemic (Hamilton et al., 2020; Schwartzman, 2020; Shin & Hickey, 2020; W Zhang et al., 2020). Echoing Aucejo et al. (2020), Espinosa Castro (2020) fears that such loss in learning gains could lead to the “exacerbation of inequality gaps due to the circumstance that students were receiving less knowledge that could help them take advantage of future opportunities” (p. 4).

One recommended way to address such issue was offered by Arnove (2020). He calls for changing the narrative; he argues that a worry about learning loss “implies that there is some divinely ordained amount of knowledge that must be learned in a specified amount of time” (p. 44). He suggests a shift towards “problem-posing curriculum” where students are encouraged to critically

examine problems in their own context. Erfurth and Ridge (2020) recommend a similar approach as they suggest that incorporating “project-based learning” allows for more *flexibility* and could encourage students to “learn several subjects at once” (p. 13). Others like Hughes (2020) support calls for reducing classroom hours and “for once, not to have [students] rush through the curriculum” (p. 71); similarly, Erfurth and Ridge (2020) call for showing “more flexibility in scheduling and modes of learning” (p. 13). Principles in Hamilton et al. (2020) expressed high interest in a few remedies with the top three being: “providing tutoring during the 2020-2021 school year, changing grading or credit requirements for students to be promoted to the next grade level, [and] modifying the 2020-2021 school day curriculum to help students catch up” (p. 12).

While these alternatives are not necessarily ideal or effective as a one-size-fits-all solution, they stem from the call for considering this disruption as an opportunity to both highlight areas that need improvement in our education system and transform our understanding of teaching and learning in general, not just during this pandemic (e.g., Hughes, 2020; Watermeyer et al., 2020; Zhao, 2020). —“COVID-19 has thus not only forced change but revealed quite how much such change is overdue” (Watermeyer et al., 2020, p. 2).

#### **4.4.2 Supporting teachers**

Another area that was discussed relates to teachers. The UNESCO, UNICEF and the World Bank (2020) report brought up the issue of *policies to support teachers* as one of their key findings. As they elaborated, they explained “this

support most frequently took the form of instruction on how to deliver lessons through distance learning” (p. 7). The idea to provide teachers with future support highlights the possibility that a gap in teacher training has been identified in regard to the practice of TDP (Hamilton et al., 2020; Trust & Whalen, 2020; Weiwei Zhang et al., 2020).

Hamilton et al. (2020) highlight possible areas of interest. They conducted a survey asking teachers about their needs in terms of professional development, the most highly ranked issues were: “strategies to keep students engaged and motivated to learn remotely, strategies or resources to address the loss of students’ opportunities to engage in hands-on learning, [and] guidance and/or tools for assessing students’ social and emotional wellbeing” (p. 9).

DeMatthews et al. (2020) do not highlight any areas that need addressing, but they do call for the involvement of educational researchers in the process of developing and offering “timely professional development opportunities” to provide educators with the ability “to make rapid, informed, evidence-based decisions” (p. 399).

#### **4.4.3 Wellbeing**

Addressing mental and emotional wellbeing, not surprisingly, has become increasingly important in this atmosphere (Baloran, 2020; Davis et al., 2020; Day et al., 2020; Hamilton et al., 2020; Kaplan-Rakowski, 2020; Watermeyer et al., 2020; Weis et al., 2020). Anticipating higher levels of burnout and stress resulting from TDP and lockdown, many studies recommend that institutions

“develop an innovative and helpful approach to promote and address the mental health issues” (Baloran, 2020, p. 640) to assist both teachers and students in handling the burden experienced by the pandemic and safety measures needed for it. Hamilton et al. (2020) also conclude from their surveys that teachers, more in high-poverty schools than others, have expressed the need for “social and emotional learning lesson plans they can use with their students” (p. 10).

#### **4.4.4 Financial cost**

Conversations also share one common thread about the financial cost the pandemic has had on institutions and individuals (Aucejo et al., 2020; Chu et al., 2020; Day et al., 2020; Hamilton et al., 2020; Lagi, 2020; Shin & Hickey, 2020; UNESCO, UNICEF and the World Bank, 2020; Watermeyer et al., 2020). Burki (2020) and Hartocollis (2020) anticipate student retention in higher education will become a concern for universities. Higher education academics in Watermeyer and colleagues’ (2020) survey expressed concerns over cost-cutting plans that are now more probable given the “inescapable economic impacts” (p. 13).

Many also argue that the socioeconomic gap among students will be further widened (Arnove, 2020; Aucejo et al., 2020; Chu et al., 2020; Day et al., 2020; Erfurth & Ridge, 2020; Shin & Hickey, 2020; UNESCO, UNICEF and the World Bank, 2020). This gap prompted foregrounding issues of access. In their October 2020 report, UNESCO, UNICEF and the World Bank (2020) shared that most countries that participated in their survey “have introduced at

least one measure to increase access to the devices and connectivity needed for online learning” (p. 7) in an attempt to make remote learning more accessible to all. Similarly, Vollbrecht et al. (2020) suggest offering asynchronous options that can allow learners to “complete modules when they have reliable internet access” (p. 723).

#### **4.4.5 While we wait...**

For the time being, it is safe to assume, with a heavy heart, that the pandemic is not going to be eradicated any time soon; safety measures (including the need for remote instruction) will stay in play until our containment of Covid-19 is manageable. In this respect, DeMatthews et al. (2020) calls for finding ways to better utilize the dependency on remote instruction to create a better learning environment. Although Watermeyer et al. (2020) assert, “we are only at the earliest of beginnings of recognising and understanding these impacts on the role of academics and the future of global higher education” (p. 17), this uncertainty have not deterred researchers from suggesting ways to move forward.

Arnove (2020) discusses the possibility of transforming the remote environment to an opportunity to connect with others whom they would not have access to otherwise; he believes such connections should foster discussions about “existential challenges to individual and familial well-being: housing and food security, the quality of the water they drink and the air they breathe, and dramatic changes in the environment that threaten their communities” (p. 44). Echoing the findings of Hamilton et al. (2020), Carrillo

and Flores (2020) highlight the need to integrate “the social and collaborative components” as we attempt to find effective remote teaching approaches.

While some believe that the pandemic has merely sped up *the inevitable* (Fullan, 2020; Watermeyer et al., 2020), Watermeyer et al. (2020) predict that “the aggressiveness of the case being made in an emergency context is bound to negatively prejudice the views of many already wary and more so, over-burdened and disconsolate workers” (p. 16). Finally, with this revolutionary direction in mind, Selwyn’s remarks about what might seem unrealistically hopeful should be considered when discussing our post-pandemic possibilities. He cautions that as a majority in the field of TEL are “fixated on the ‘state of the art,’ and are less interested in the ‘state of the actual’” (Selwyn & Jandrić, 2020, p. 1000), there is a risk of having their hopes for a better future to “tip over into a subjective, partisan approach that technology is inherently ‘a good thing’” (ibid.).

#### **4.5 Is there a gap?**

While these studies have helped me gain a general understanding of what was happening with education due to the pandemic, it is evident that this body of research is lacking in several ways. To begin with, given the sudden nature of the pandemic, many of the studies that were published in the timeframe that I set for my search (up until Dec 2020) were arguably rushed for publication. This can explain why most of the studies were *descriptive* in nature, that is only sharing the nonsystematic observations of researchers and/or their participants. This is problematic in two ways; firstly, the pandemic

has created a very different form of life, one which we have not had the time to fully understand and grasp yet. This could easily lead us to focus on the *surface* of our reality or what we see, dismissing crucial yet not very clear details or other deeper levels of this observed reality, as our human nature dictates. This means that these personal accounts of the changes that have happened due to the pandemic lack structure and can be a fairly random view of what is important or worth investigating. While such research can help us see the world unfiltered through the eyes of people at the time, this form of research cannot be considered comprehensive enough; it should be supported by other studies as recommended by a 2020 report issued by UNESCO, UNICEF and the World Bank (2020). The report highlights the need for “more in-depth qualitative research ... to capture the impacts of policy responses and interventions, and to support subsequent educational planning and programming” (p. 8). This study does just that by using an in-depth qualitative approach to collecting and analyzing data to better understand the development of TDP. As described in detail in Chapter 5: Research design, data for this study was collected at multiple points (pre-Covid, just before TDP started, and right after the first round of TDP) using interviews conducted with 12 participants.

The other more serious problem with this gap, as I see it as a researcher who highly appreciates the role theory plays in research, is that these rushed observations were rarely, or at least not clearly, informed by or guided by a theoretical understanding of social change, or other kind of theory. Having theory as a tool to guide our investigations of social activities is helpful

because theory can help increase the chances of making our research valid and reliable. As described by Cohen et al. (2018):

Theories help us to think. They articulate and organize ways of approaching a problem or phenomenon. They assemble and clarify key concepts and their relationships, principles and abstractions, explanations and propositions. They can stimulate research questions and hypotheses. Theories connect concepts into a logical and coherent whole or framework.

Theories help us learn: they can render ideas testable, define ways of working, tell us which ideas, statements, conclusions, [and] lines of reasoning stand fast when tested rigorously and which appear to be valid, reliable, credible, legitimate, sound, reasonable and useful (pp. 77-78).

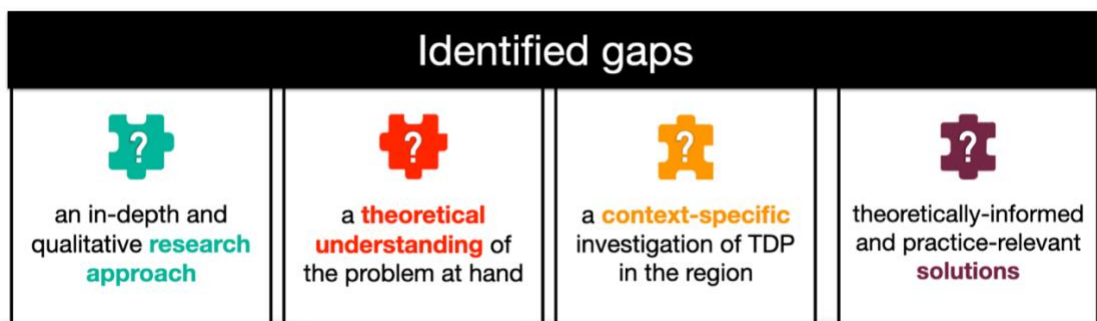
The absence of theory could also partly explain why few studies managed to offer valid and structured solutions to address the issues that were reported in these studies. This specific gap is what makes this study stand out the most, I believe. Being based on a theoretical understanding of human activity and social change, this research project successfully identified the areas at which it should look and further investigate in the early stages of TDP as the unique pandemic situation unfolded; instead of waiting till after the situation settled down to have the complete picture. CHAT has informed my understanding of what elements are the most important in the picture, so I knew where to look and what to ask my participants about.



Additionally, as postulated by CHAT (see Chapter 2), the environment hosting and contributing to human activity plays a big role in uniquely shaping the activity, leading to different tensions and development trajectories. This means, while there were studies about the practice of TDP in other contexts, none of them covered the state of higher education in the UAE. Therefore, looking at the paradigm I adopt and the theoretical framework I utilize, one can argue that the need for this study is present as it uncovers the dynamics of the contextualized experiences of teachers in a local context.

To conclude, in terms of the emerging practice of TDP, this study aims to fill the gaps summarized in Figure 4.3 by sharing its unique contribution through a). utilizing an in-depth, historically-situated, and qualitative approach to examine TDP, b). analyzing the phenomenon using a theoretical foundation of CHAT principles and activity systems analysis, c). investigating the practice at a local context at a higher education institute in the UAE, and d). offering theoretically-informed and practice-relevant solutions.

**Figure 4.3 Gaps identified in the literature**



## 4.6 Summary

In this chapter, I explained the scope of the main term used in the study, *teaching during a pandemic*, and highlighted its scope and uniqueness as a unique form of technology-mediated teaching. I also shared the main issues and challenges that were associated with TDP along with some predictions and recommendations offered by researchers addressing these deficiencies and areas of strength. Finally, I discussed how this study contributes to the growing thread of research covering TDP opinions and experiences around the world. With this clear need for this culturally-historically situated study, in the next chapter, I will share the research design choices that shape this study.

## Chapter 5: Research design

When I first drafted this chapter, I started the section with a quote from Yin (2018, p. 20) describing research design as “the logical sequence that connects the empirical data to a study's initial research questions and, ultimately, to its conclusions.” Although he might have not had meant it to be as I understood it, his notion of *logical sequence* from the “initial” point A (research questions) through point B (empirical data) and to point C (implications/conclusions) has always been an area of big struggle for me. In all my research attempts, I start with the intention of answering a certain question, but I almost never end up with the same question, and I always find myself revising/modifying every aspect of my design as I go as if the research and I are two entities growing together, changing each other. I had to assume that I was doing something wrong or that my hyper-active brain made it difficult for me to follow a strictly linear progression. As I previously explained, this dance was more pronounced during the course of this study because of the pandemic. So, when I came across Maxwell's (2008) advice to researchers in his piece about designing qualitative study, a sigh of relief escaped—I am normal. He said:

Often, you will need to do a significant part of the research *before* it is clear to you what specific research questions it makes sense to try to answer.

This does not mean that qualitative researchers should, or usually do, begin studies with no questions, simply going into the field with “open minds” and *seeing what is there to be investigated*. Every researcher

begins with a substantial base of experience and theoretical knowledge, and these inevitably generate certain questions about the phenomena studied. These initial questions frame the study in important ways, influence decisions about methods, and are one basis for further focusing and development of more specific questions. However, these specific questions are generally *the result of an interactive design process, rather than the starting point* for that process. (p. 229, emphasis added)

I realized my research process was not broken; it is rather an *interactive design* process in which I responded to the needs of the study as I constantly re-evaluated its elements and their harmony. The need for this interactivity is more noticeable when researchers attempt “to study contemporary phenomena in a real-life setting, where boundaries between context and phenomenon tend to be blurred” (Gibbert & Ruigrok, 2010, p. 712), and this is exactly the case for this study and its highly-contextualized focus on the practice of TDP in the UAE.

At the risk of not being true to this interactivity, in the following sections, I will explain the design of this study in a linear manner to ensure a smooth read. I begin by reminding you of the main research (sub)question which this study aims to answer, and then I explain why and how this study is defined as a *case study*. After I offer a detailed discussion of the methods I used to collect and analyze the data, I illustrate how the theoretical choices I made have shaped the data collection and analysis processes. Finally, I discuss how I have ensured the quality and trustworthiness of this study, and I outline some

possible limitations imposed on the study due to the research design choices I made.

## **5.1 Research questions**

Qualitative case studies normally foreground the experiences of a certain group of people to better understand “why particular people (or groups) feel particular ways, the processes by which these attitudes are constructed, and the role they play in dynamic processes within the organization or group” (Palys, 2008, p. 697). In this respect, this case study aims to answer one main research question that is further defined by two sub-questions:

1. How have teachers responded to the demands of teaching during a pandemic?
  - 1.1. What kind of *issues* have teachers faced as they engaged in TDP?
  - 1.2. What kind of *strategies* have teachers utilized to respond to Covid-driven changes and challenges?

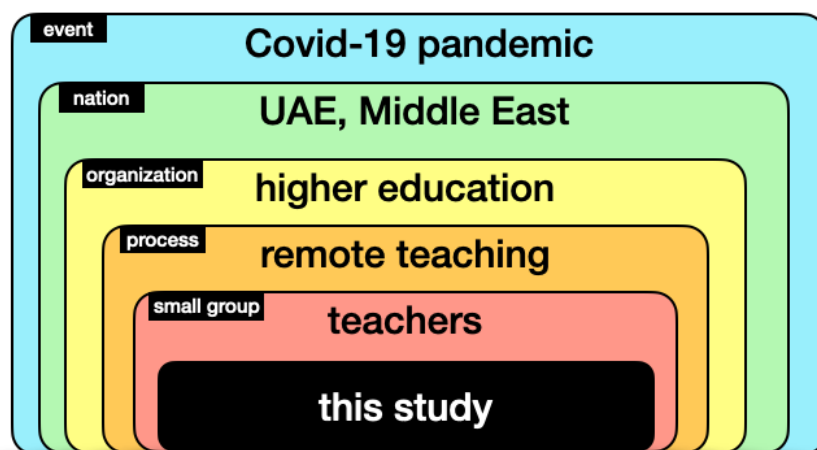
## **5.2 Case study approach**

Despite the global nature of the pandemic, as illustrated previously, Covid-19 has not had the same political, cultural, or educational ramifications for different countries. It is very interesting, for me as researcher, to see how one global issue, which, by the biological definition of it, should be identical anywhere it happens, reflects differently (and in some cases drastically) purely due to the differing environments that host this one identical issue. These environments are governed by many variables including: Covid-19

rates per capita and overall progression (WHO Health Emergency, 2020), political views and handling of Covid-19, the country's capacity and resources at different levels (e.g., health, education, economy), and the media. As a result, I believe, any non-medical study looking into Covid-19 is bound by a "complex social phenomena" (Yin, 2018, p. 5) that "involve[s] important contextual conditions pertinent to [the] case" (p. 15), making it a *case study*.

Utilizing case studies when studying global issues foregrounds the complexity of such issues; the global issue here being the pandemic's effect on education. Case studies also allow researchers to pay particularly close attention to the contextualized experience of people in an environment. In fact, Miles et al. (2014) explain, case studies are designed to focus on one "unit of analysis" which is defined by different boundaries, including: "a small group", "an organization", "a nation", "an event", and "a period of time" (pp. 28-30). All of these boundaries are factors shaping how Covid-19 has uniquely unfolded in different countries around the world. Defining these boundaries (see Figure 5.1) will facilitate a better understanding of the results drawn from the study, and they also define the bodies of knowledge to which I aim to contribute.

**Figure 5.1** The boundaries defining this case study



Given these boundaries, this case study gives me the chance, I hope, to analyze the current state of remote teaching in this context *in depth and in a comprehensive manner* (Easton, 2010). The uniqueness of this case study also stems from its context. After experiencing remote teaching and learning this rapidly and at this magnitude, the community in the UAE (e.g., administration, teachers, students) have experienced *firsthand* how different remote instruction can be. Unlike pre-Covid-19 times, for most of them, their understanding and perceptions of remote teaching and learning are no longer based on *secondhand* experiences or government policies. This shift is remarkable because it is happening in a region where, for many years, degrees earned online or via distance routes (i.e., remotely) are not easily accredited or equalized. Except for rare or pre-approved cases, a degree can only be equalized (recognized) in the UAE if it met a set of requirements identified by the Ministry of Education in the country, including: “Proving attendance in the country of study: passport and a proof of residence (entry and exit seals for the country where the applicant studied), or a copy of the

first entry to the country” (Ministry of Education, 2020e, para. 3). For my PhD at Lancaster University, for example, I am required to be in the country for 30 days for every study year despite the fact that: a. the degree is part-time *and* online, b. I am a full-time teacher, and c. Lancaster University is on the list of accredited universities by the Ministry in the country. One of the immediate (yet possibly temporary) changes resulting from Covid-19 is that this 30-day requirement has been dropped for this year (2020). Could this experience possibly redefine how attendance or other requirements are set for postgraduate degrees in the future? —This is just one example to demonstrate how Covid-19 is already reshaping education policy in the UAE, and why it is important to analytically and critically document this change as it happens.

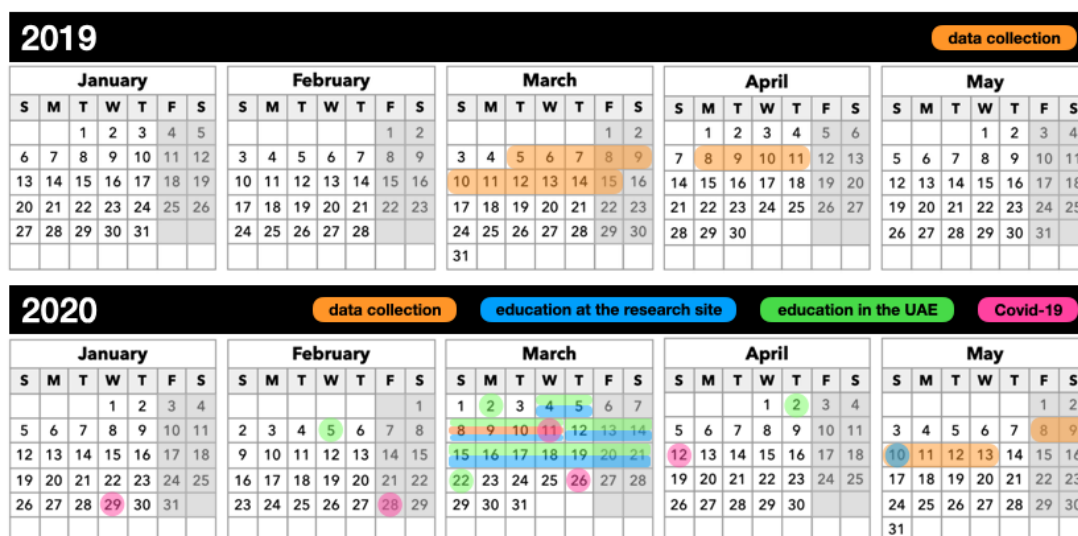
### **5.3 Data collection**

Maxwell (2012) recommends that a researcher should “not only carefully plan what you intend to do, but also be attentive to what is actually happening in the research, and *to adjust your actions to make the design more relevant and productive*” (p. 75, emphasis added). Data collection started in March 2019, before the Covid-19 madness, with the aim to learn more about teachers’ instructional practices at a laptop-based institution. However, when Covid-19 unrolled and changes started happening, I needed to make some adjustments *to make the design more relevant and productive*. Hence, the focus of the project was realigned to utilize this golden research opportunity to learn more about how these *same teachers* were experiencing this drastic change in such a short time and during trying times. Figure 5.2 outlines the four stages



of data collection and how they align to the sequence of events at the research site and in relation to Covid-19 events. The focus of 2019 data collection attempts was to learn more about participants' instructional practices for laptop-mediated classrooms in general. The focus of 2020 data collection endeavors was to learn more about participants' TDP experiences at two very crucial points: right after the pilot phase and towards the end of the first semester of TDP.

Figure 5.2 Data collection timeline



The working week starts on Sunday. Fridays and Saturdays are weekends.

**MARCH 2019**

5 - 15 Interview 1

**APRIL 2019**

8 - 11 Interview 2

**JANUARY 2020**

29 First COVID19 case in the UAE

**FEBRUARY 2020**

5 Universities across the country sends advisory email to "be cautious and seek medical help should they develop a cough or fever, especially after travelling" (Rizvi, 2020, para. 1)

28 first quarantine in the capital of the UAE

**MARCH 2020**

2 MOE announces pilot phase of "distance learning initiative"

4 - 5 Early PD sessions at the institute

4 - 5 Pilot online classes in the UAE and at the institute

8 - 11 Interview 3

**MARCH 2020 — cont.**

11 WHO announces COVID19 is a pandemic

8 - 21 Spring break for students

8 - 14 Spring break for teachers in the UAE

8 - 14 PD week for teachers at the institute

15 - 21 PD week for teachers in the UAE

15 - 21 Spring break for teachers at the institute

22 "Distance learning" started in the UAE

26 The national sanitization program started

**APRIL 2020**

2 Distance learning extended to the end of the semester

12 Drive-through testing centers launched across the country

**MAY 2020**

8 - 13 Interview 4

10 Last teaching day of Spring 2020 at the institute



- MOE: Ministry of Education
- WHO: World Health Organization
- PD: Professional development

**5.3.1 Participants**

As noted in Figure 5.3 below, I had different numbers of participants each time, with a few being consistently available. As a result, I have decided to

use the 12 participants who were interviewed in the last interview as my main participants. Other interviews did not go to waste as they facilitated a better understanding of the *community* that surrounds my participants and drew a clearer picture of the *norms* adopted at the research site. As well, although I would have preferred to focus solely on the ones whom I had interviewed in both 2019 and 2020, there is one participant who was not involved in the 2019 phase, but I decided to include them because they had participated in both 2020 interviews (the main focus of the study). I also made up for the lack of 2019 data by asking about their pre-pandemic experience throughout their interview which provided some background to their teaching experience. With these criteria in mind, I ended up with 12 participants whose experiences form the foundation of the study and my understanding of the phenomenon.

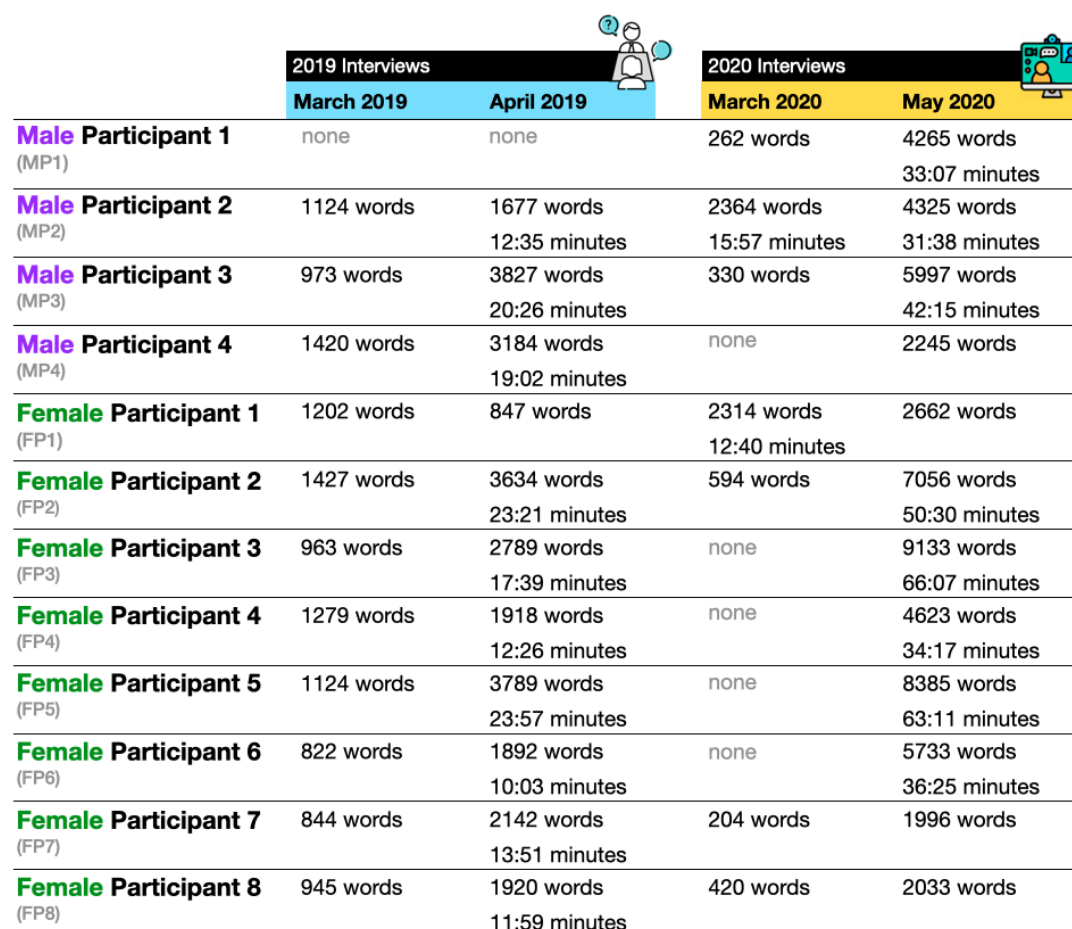
**Figure 5.3 How data were collected**



	2019 Interviews 		2020 Interviews 	
	March 2019	April 2019	March 2020	May 2020
<b>Instrument</b>	Semi-structured interviews	Follow-up interviews	Structured interviews	Semi-structured interviews
<b>Modality</b>	In person or by email	In person or by email	By email	Via Zoom or by email
<b>Participants</b>	41	11	10	12

The main pool of participants was made of 4 male participants (MP) and 8 female participants (FP). All of them have 12+ years of teaching experience and have been teaching at the institute for more than 5 years. I chose to share the gender of these participants because they teach at a women’s campus, and the culture that hosts the activity has different boundaries shaping interactions with a person from a different gender. This means

covering the activity from both female and male perspectives is needed to attempt a more comprehensive understanding of the practice. Figure 5.4 showcases participants' involvement in this study.

**Figure 5.4 Participants' involvement throughout data collection phases**



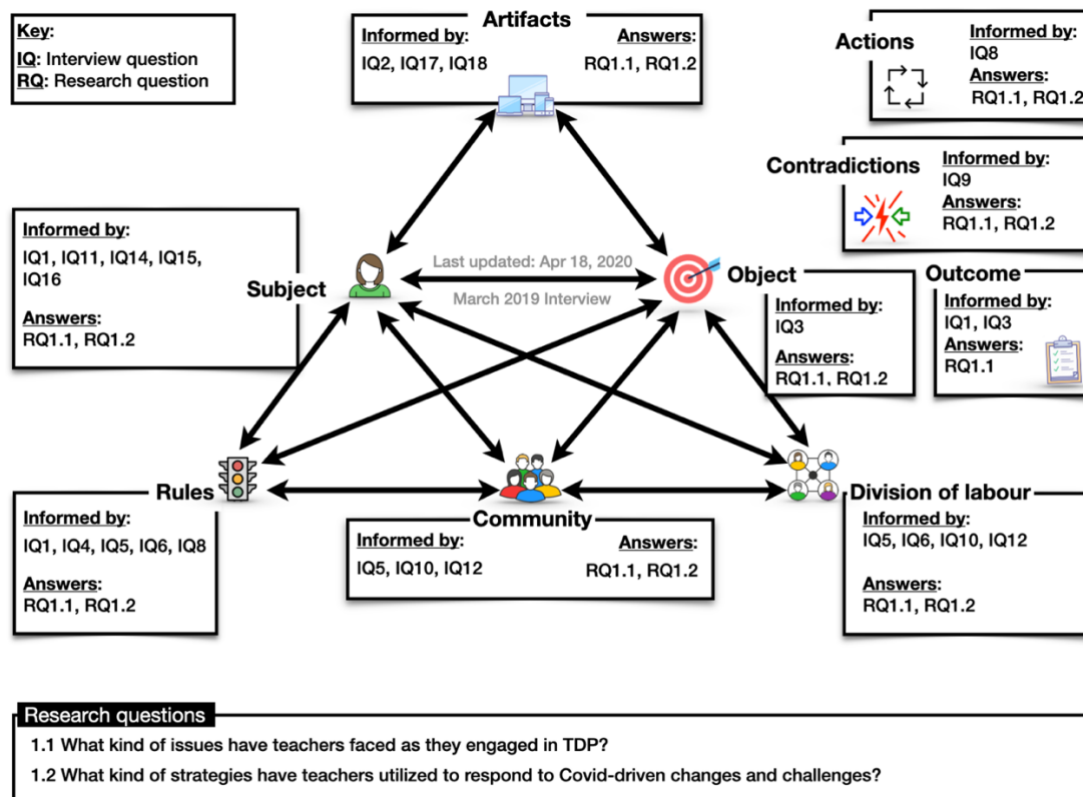
	2019 Interviews 		2020 Interviews 	
	March 2019	April 2019	March 2020	May 2020
<b>Male Participant 1</b> (MP1)	none	none	262 words	4265 words 33:07 minutes
<b>Male Participant 2</b> (MP2)	1124 words	1677 words 12:35 minutes	2364 words 15:57 minutes	4325 words 31:38 minutes
<b>Male Participant 3</b> (MP3)	973 words	3827 words 20:26 minutes	330 words	5997 words 42:15 minutes
<b>Male Participant 4</b> (MP4)	1420 words	3184 words 19:02 minutes	none	2245 words
<b>Female Participant 1</b> (FP1)	1202 words	847 words	2314 words 12:40 minutes	2662 words
<b>Female Participant 2</b> (FP2)	1427 words	3634 words 23:21 minutes	594 words	7056 words 50:30 minutes
<b>Female Participant 3</b> (FP3)	963 words	2789 words 17:39 minutes	none	9133 words 66:07 minutes
<b>Female Participant 4</b> (FP4)	1279 words	1918 words 12:26 minutes	none	4623 words 34:17 minutes
<b>Female Participant 5</b> (FP5)	1124 words	3789 words 23:57 minutes	none	8385 words 63:11 minutes
<b>Female Participant 6</b> (FP6)	822 words	1892 words 10:03 minutes	none	5733 words 36:25 minutes
<b>Female Participant 7</b> (FP7)	844 words	2142 words 13:51 minutes	204 words	1996 words
<b>Female Participant 8</b> (FP8)	945 words	1920 words 11:59 minutes	420 words	2033 words

### 5.3.2 Instruments

For the first phase, interview questions were designed to go in line with CHAT and to inform the analytical framework used in the analysis: activity systems analysis. In this line, questions were formed to cover different aspects of an activity system without referring to theoretical terminology that might confuse participants. These questions were piloted in my Module 4 project and were

modified based on my findings in that mini case study. Figure 5.5 maps the interview questions to elements of the activity system model (ASM). It should be noted that this stage of data collection does not directly answer the main research questions, but interviews in this stage provide historicity and allow for a better understanding of how participants' TDP issues (RQ1.1) and strategies (RQ1.2) have developed. This is why I chose to mark them all as answering both questions.

**Figure 5.5 Mapping interview 1 questions to ASM elements**



The follow-up interviews in Phase 1 (April 2019) were designed to further discuss the role of the community. They also allowed for participants to elaborate on certain elements that were not entirely clear in their initial semi-structured interview. These interviews were partly semi-structured as they

covered questions about a set of materials that were commonly used at the institute. I sought to ask for their perspectives about the same set of materials and how they utilized them in class. This helped me further understand each participant's teaching philosophy and gave me a very useful point of reference on how they adapt content to suit their teaching style and their perceived students' needs.

Phase 2 (2020) was the messy part, and the most exciting. I had to act quickly given how unpredictable the situation was and how very abrupt changes were. I managed to conduct two interviews, interview 3 and interview 4. Interview 3 was done right after the two-day pilot and before the spring break. I wanted to capture their pilot experience *fresh* before it was clouded with the developing situation. I felt it was important because, being a CHAT believer, I value the process of development as much as I value the end result. That said, the pilot for remote teaching was done within a 48-hour notice. I did not have the luxury of time to a). design a detailed instrument for interview 3 or b). expect my participants to answer endless questions. Interview 3 had to be short and precise. I asked them in March 2020 only four questions, but they did reveal a lot. These were:

1. From your experience last week, what are your thoughts on the “pilot phase”? —How did you run these online classes? How different/similar were they to your normal classes? How successful do you feel they were?

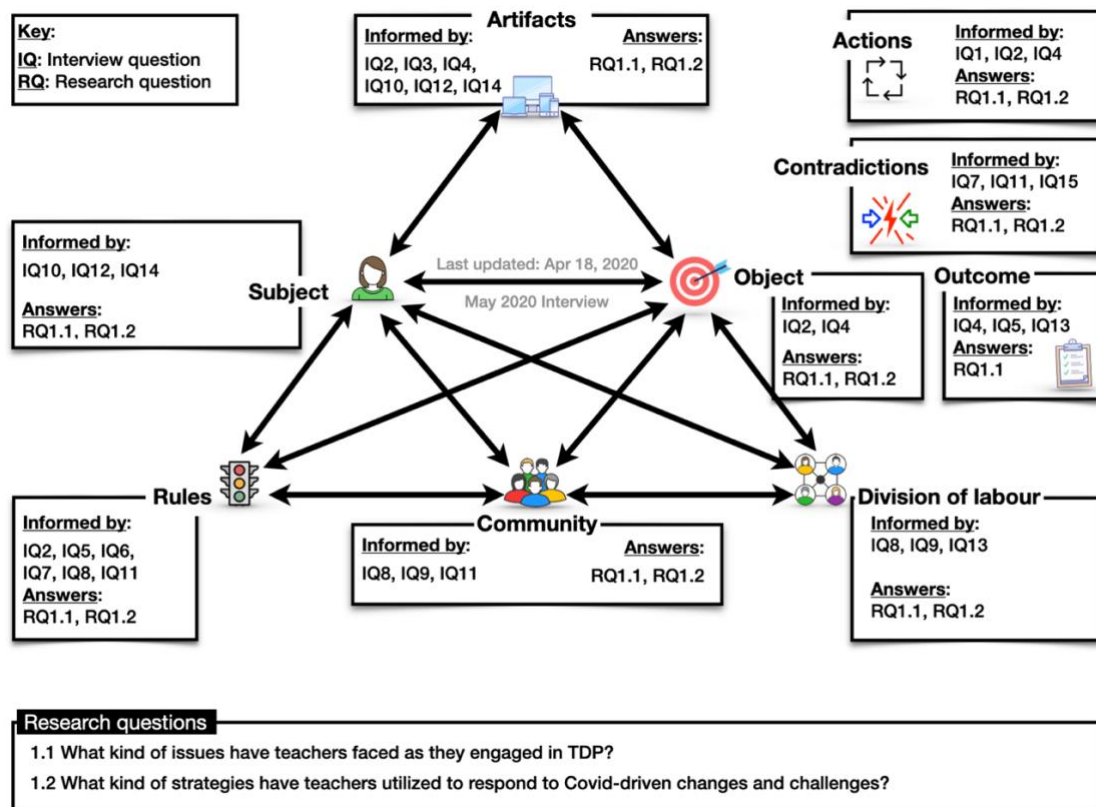
2. As you plan for the next phase (2 weeks of online classes): How are you planning to create/adapt/use learning materials for your online classes? —What have you learned from the pilot phase?
3. What are the challenges that you've faced or expect to face in the process?
4. What kind of support have you used (or plan to use) to facilitate creating/adapting/using materials?

I heard back from 6 main participants and 3 other community members (total n=9).

Interview 4 was conducted in May 2019. For this interview, I had enough time to think about my approach beforehand. With no theory about TDP, I was very fortunate to have had CHAT in my arsenal, a theory that can be utilized to examine *any kind* of human activity as it evolves and responds to change. This round of interviews was the main source of information for this phase/study, and it was *very* rich. It was done in the last stretch of the Spring semester. Questions for this last interview were based on the elements of an activity system, with an added emphasis on trying to understand the very unique circumstances surrounding and shaping the activity. Figure 5.6 maps these questions to ASM elements. Surely, when participants discussed issues (RQ1.1), there were a number of (un)successful (in)direct strategies (RQ1.2) that they've shared or attempted. Hence, each element in the system informs both RQs. I should also note that prior to administering these questions, I had piloted the questions with a non-participant faculty member at the same

institute. The pilot was informative and useful; I removed questions that seemed to elicit the same kind of answer and reworded questions that were not clear. I also needed to eliminate a few questions because the pilot interview took more than an hour; that would have been too much for my participants.

**Figure 5.6 Mapping interview 4 questions to ASM elements**



You might have noticed that the activity systems I've used to map the instruments do not include the environment, the element I called for including in Chapter 2. This is because I only concluded the need for the added element when I was conducting my analysis. The fact that I did not intentionally ask about the environment as directly as other ASM elements *and still* got data that covers it could be used to further argue that the



environment does in fact actively contribute to and shape our daily activities even if we don't pay direct attention to its role.

### **5.3.3 Ethical considerations**

As discussed by BERA (2018), for educational research to be considered “ethical, justifiable and sound” (p. 1), researchers need to adhere to certain ethical guidelines that ensure the *appropriate* course of action was followed throughout the research process. This includes providing participants with a chance to understand the scope of the research they're being interviewed for and what their voluntary participation entails. All participants in this study were provided with an information sheet that explains the details of this study and their involvement. They were also promised anonymity and informed that they can withdraw at any time without any consequences. As well, data from their participation are saved on my secure and multi-factor authenticated Lancaster cloud drive, which cannot be accessed by anyone else.

### **5.4 Data analysis**

After collecting the data, all documents were saved on a secure storage system, and a backup copy was saved on Lancaster's OneDrive. Interviews were transcribed using Otter.ai which is a website that provides instant auto-transcribing services with the ability to go over it again, word by word, and edit. During the process of analysis, I was guided by two orientations: philosophical and theoretical. That is, adopting a CHAT understanding of human activity (theoretical orientation), I utilized the activity system model as a guiding framework to help me achieve my critical realist aims (philosophical

orientation) of this study: a). understand participants' understanding of the pandemic reality and b). figure out what mechanisms (social, physical, or conceptual) caused or generated these experiences. To achieve these aims, I went through an iterative process. I analyzed the data sets many times trying to get familiar with the data and identify how each activity system element can be defined for this case study, or its scope—a process that is far from being straightforward and direct. As I went through each element of the activity system, I focused on the tensions that were observed. My analysis focused not only on identifying these tensions and how they were created, but also on examining how participants tried to resolve them, successfully or not. Figure 5.7 summarizes the process of analysis, without being true to its messy and iterative nature.

**Figure 5.7 The stages and steps taken to analyze the data**

stage	data analysis steps				
<b>1</b>	transcribe interviews, get familiar with the data, and gain a general understanding of participants and the phenomenon <b>a</b>				
<b>2</b>	read data to note emerging themes/topics, in a general sense <b>b</b>	identify common themes (e.g., group work, teaching beliefs, tracking) and not so common but important ones (e.g., special needs, tests, positive experience) <b>c</b>	read data again and code/mark chunks using identified themes <b>d</b>	create a sheet to list themes identified for each participant <b>e</b>	rename or reword themes to maintain theme consistency across interviews <b>f</b>
<b>3</b>	write individual narratives summarizing each participant's 2019-2020 journey and highlighting how they negotiated their way through TDP <b>g</b>				
<b>4</b>	use blank activity system models (Al-Ali, 2020) to match themes to activity system elements (e.g., teaching beliefs -> subject, group work -> division of labor, inactive students -> community) <b>h</b>	read data again with activity system elements in mind (e.g., tensions, resolutions, actions) <b>i</b>	use another blank activity system model to group similar themes for each element into general issues (e.g., under division of labor, themes of <i>student responsibility</i> , <i>teacher presence</i> , <i>student-teacher interaction</i> were grouped as <i>student-dependent class</i> ) <b>j</b>		
<b>5</b>	write an activity-system-based analysis (results) and discuss emerging patterns (discussion) using outcomes from g, h, and j <b>k</b>				
<b>6</b>	weigh my options after realizing word count is a problem <b>l</b>	remove outcome g and identify important chunks to keep <b>m</b>	rewrite outcome k and incorporate outcome m as much as possible <b>n</b>		

## 5.5 Theory and research design

As this research study is guided and informed by theory, it is important that I explain how this theoretical foundation shaped my research design choices.

As previously discussed, CHAT is a theory that can be used to understand the development of human mind and activity, any activity; “through activities, we also transform our social conditions, resolve contradictions, generate new cultural artifacts, and create new forms of life and the self” (Sannino et al.,

2009, p. 1). Such transformations can be analyzed through the use of activity systems analysis (ASA). Acknowledged as a methodology (Yamagata-Lynch, 2010), ASA identifies for researchers the main constructs or elements for which they should look or on which they should focus at various stages of their research, including data collection and data analysis. Basing the analysis on the activity system model that was introduced by Engeström, researchers should utilize or develop data collection means that inform their understanding of all elements in an activity system, even (or especially) the ones that are not visible in the model: actions and contradictions.

In general terms, ASA was a very useful tool for my study because I was venturing into the unknown; I was investigating a practice—TDP—that I knew nothing about and couldn't find solid literature about, as quickly as I needed. With no pandemic-specific body of knowledge or theory to inform my understanding, I had so many questions: what should I look for? What should I ask about? What should I expect? How can I find *it*? Issues of validity and reliability would have haunted me had I not had CHAT and ASA. Using an activity system, I was able to use its constructs to identify the elements that I need to ask about in my interviews, or to identify the areas which needed to be investigated, for me to draw a clear picture of an emerging form of human activity: teaching during a pandemic. This helped me develop my interview questions.

CHAT and ASA also facilitated my data analysis process. The main elements of an activity system were my *codes*, although these codes are almost always open to (re)interpretation. I mean, although my participants gave me all the

information I needed to analyze the activity, they did not clearly label their answers with ASA constructs, and although I had mapped my questions to ASA, answers did not conform to the intended ASA especially that contradictions were all over the interviews. And, honestly, being immersed in the practice myself, it was not an easy task to detach myself from my common understanding as a *teacher* of the practice, and embrace the understanding of an (wannabe) *activity theorist* of the practice. A memorable example of this struggle was with the division of labor. As a teacher, I see the classroom dynamics in a certain way: individual/pair/group work or student/teacher-centered. From an activity theory perspective, these dynamics are seen differently. In fact, they were just one level of the division of labor which extended to include players outside the classroom, both *horizontally and vertically*: colleagues, support teams, management, etc. It took a few analyses for me to fully embrace an activity theorist view of TDP dynamics.

After I had identified all ASA elements from the data, CHAT principles provided me with ways to explain the results I concluded and the dynamics I identified. It was very exciting to see Vygotsky's principles and ideas in play; they were still validly applicable although his principles are from another time. Light bulbs kept popping in every direction during my analysis. The more I read about CHAT, the more I revisited my analysis, the more questions I had, and the more I needed to read. An excitingly endless cycle. One example of this can be found in the conclusion of the results section when I realized that a CHAT concept, which I never thought I'd mention in my study, turned out to

be a very interesting way of interpreting the results—A whole new study, I think.

## **5.6 Quality and trustworthiness**

Assuring the quality of research is seen important because, as stated by Feldman (2003), “although it may be impossible to show that the findings of educational research are true, they ought to be more than believable—we must have good reasons to trust them to be true” (p. 26). Creswell and Miller (2000) believe that validity in qualitative research can be seen as a matter of “how accurately the account represents participants’ realities of the social phenomena and is credible to them” (pp. 124-125). That is, validity is not an issue of how or what kind of data were collected but rather how they were interpreted. Maxwell (2012) establishes that there are three ways of categorizing the inferences we draw from the data and accordingly the ways we validate these inferences (see Figure 5.8).

**Figure 5.8 Maxwell's (2012) classification of validity in qualitative research**

## Issues of validity in qualitative research



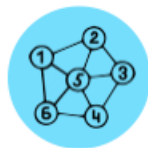
### **descriptive validity**

concerns how factually accurate participants' accounts were reported, whether these accounts were seen or heard (primary) or inferred from other data (secondary).



### **interpretive validity**

concerns understanding the way participants of a study interpret the phenomenon at hand



### **theoretical validity**

concerns how the theoretical concepts *and* the assumed theoretical relations among them were defined and applied to the data

For a study to be descriptively valid, its account of what was seen and heard needs to be accurate without any alteration; an aspect I can assure you is not a concern in this study as all interviews were transcribed word for word and double-checked for accuracy. Secondly, interpretive validity concerns my ability to understand my participants' account of the phenomenon, and as Maxwell concludes, "accounts of participants' meanings are never a matter of direct access, but are always *constructed* by the researcher(s) on the basis of participants' accounts and other evidence" (p. 139, emphasis in original). This is where my insider knowledge (i.e., other evidence) of the context and the environment comes in handy, as it has allowed for a more accurate construction of participants' accounts. For example, participants referred to continuous changes in assessments as being one of issues that caused a lot of unrest; an outsider might take such statements at face value, but having

been part of this group and subjected to these changes, I have seen firsthand how they affected morale, caused a great deal of confusion, and led to frustration. With this insider knowledge, I was able to understand the depth of this conundrum; something an outsider would not be able to easily reach. Finally, issues of theoretical validity, for me, highlight the beauty of using CHAT and activity systems for qualitative research. While the theory generally outlines the constructs that I should account for, these constructs are open to interpretation, which is why I made sure to be very clear about the way I define these constructs in this study. As for the theoretical relations that are assumed between these constructs, CHAT suggests that each activity is unique its own way and although it presupposes that constructs are interconnected, it does account for variation (through contradictions). This is why I've always admired how CHAT guides the researcher, but allows the data to speak for themselves. Therefore, to ensure theoretical validity with CHAT, I believe, a researcher needs to be upfront about how they define the constructs and see their connections (or lack of), which is the main elements of activity systems analysis.

## **5.7 Limitations**

### **5.7.1 Case study**

Surely, a case study approach has its limitations. The boundaries that define this study are also barriers that limit the possibility of generalizing the findings of this study. Although the phenomenon that governs the context is global, all of its social, political, and educational ramifications are uniquely defined in each country, and even each organization. Hence, the results of this study



can only be generalized to contexts that bear a close resemblance to the research context. Nonetheless, as Sayer (2008) argues, “the non-generalizability of many case studies does not necessarily render them pointless” (p. 13). Such studies, they explain, allow us to build “our knowledge of particulars, as well as of generalities” (ibid.) which is needed to sharpen our practical knowledge of the phenomenon. And, I can safely argue that our practical knowledge of TDP is an area that needs all the help it can get, even from mini and highly-contextualized case studies. Maxwell (2012), similarly, echoes Sayer’s point and argues that the aim of most qualitative studies is “to understand the process, meanings, and local contextual influences involved in the phenomena of interest, for the specific settings of individuals studied” (p. 94). This stands true for this thesis especially with its CHAT-based outlook.

### **5.7.2 Data collection timeframe**

Another research design aspect to keep in mind, although not strictly a limitation but an important consideration, is the timing of data collection. Data were collected towards the beginning of the pandemic in the country when the situation was very volatile and unprecedented. I have no doubt that participants in the study have now (a year and so after data collection) developed a more refined form of TDP and are closer towards stability—in CHAT terms, stability never means no change, but it means change is more manageable. In view of this, results of this study should be acknowledged as an *initial* stage of the development process and nowhere close to a final stage.

### 5.7.3 Research setting

This research project was conducted in the Middle East and North Africa (MENA) region. Being from and in the region, it never grows old how unique and different this region is from the very well-researched regions, such as North America or the UK. Growing up and studying in this region, I've always found it difficult to find studies and publications that are conducted in my region. It was frustrating to feel underrepresented, but it was also exciting because it meant that there will always be a gap for me to fill as a researcher in the future. Little did I know about the reality of doing and conducting research in the region back then.

To conduct research anywhere, a social researcher is ethically obliged to ensure that their participants are well informed, kept safe, and not harmed during or due to the research project. Other ethical issues such as confidentiality and anonymity are dependent on the project but should be clarified to participants. To ensure these ethical considerations are accounted for, institutions and even governments in the MENA region require researchers to apply to each entity's (at which the research will be conducted) institutional review board (IRB) to get their approval to conduct research at the site and collect data. These approvals are not straight forward *and* vary from one place to another because, as Cohen et al. (2018) explain:

Ethical decisions are contextually situated — socially, politically, institutionally, culturally, personally — and each piece of research raises ethical issue and dilemmas for the researcher. Ethical norms

vary in different parts of the world, and what is acceptable in a western culture may not apply elsewhere. (p. 111)

Indeed, the culture hosting academia in many countries in the MENA region is uniquely conservative and highly private, making it difficult for institutions to grant approvals that might be considered infringing on the host culture. This could include, for example, interviewing students as some institutes require that the students' parents approve of their participation—especially female students. While, I have to admit, the culture itself is becoming less and less stringent in terms of access and privacy—especially with the culture opening up on social media, institutional practices have not kept up with these changes, and they have largely been maintaining the same level of *extra care* when considering ethical approvals; and with extra care always comes the need for extra, extra time for any approval—if granted—to see light.

Additionally, although it is not written or said anywhere, many researchers in the region (including myself) are under the assumption that if an institution grants ethical approval to a researcher, a researcher is expected to produce a favorable report of the institution, or at least not an overly critical one.

Whether this is true or not is yet to be discovered by a brave soul who is not fazed by the possibility of losing their job as a result of their brave attempt to bust this research myth. I am sad to admit that I do not possess such paranormal courage.

With this frame defining the research context of study, I depended primarily on the ethical approval that I got from Lancaster University (LU) to ensure that

my project is ethical and appropriate. As I followed the guidelines set by LU, I relied on my colleagues' kindness and generosity to participate in this study and made sure they were well informed, and their participation was kept confidential and anonymous throughout the process. However, while LU's approval was enough for me to interview my colleagues, it was not enough for me to access students or administration-level participants or to use institution-specific documents in the process of data collection or analysis. Access to all of this would require more time, for the reasons discussed above, more time than this thesis could afford due to the time-sensitive and unusual nature of the research problem.

As well, having interviewed *my colleagues*, I, on the one hand, had to be careful during my interviews not to sound like I—a fellow, younger, and less experienced colleague—was judging their practice. I would not say that this has restricted my ability to collect or interpret data as I did ask when something was not clear or when I needed more details, but, in the back of my mind, I was conscious of the fact that these were my colleagues. On the other hand, having this insider knowledge and understanding of the context and of my colleagues was a *great* advantage, especially during these turbulent times. Any outsider would have found it impossible to understand the intricate dynamics of the setting and of the practice well enough and fast enough to conduct this project or to interpret the results meaningfully. This is to say that while my being an insider might have made it difficult for me to poke further than I did, the insider knowledge I had was definitely needed for me to be able

to understand the activity I studied and to more easily identify and fully understand the contradictions that I've observed.

#### **5.7.4 Acknowledging the privilege**

Finally, it is worth noting, as well, that towards the final stages of writing this thesis, I came across a report produced by UNESCO, UNICEF and the World Bank (2020). Reading it, I realized that I had based my understanding of TDP on the assumption that it is primarily done using the internet. I was wrong. The report explains that while the majority of “high-income countries” utilized “online platforms” among other means, “low-income countries” depended primarily on broadcast media such as radio and television to facilitate teaching and learning during the pandemic. If anything, this realization assures one of the many privileges of which I am grossly unaware—“a privileged status is often outside of the awareness of the person possessing it” (Black & Stone, 2005, p. 244).

The reason I chose to share this is to make you, the reader, aware that my review of the literature, my understanding of this study, and my discussion of the results have been shaped by this unacknowledged privilege. The way I had perceived remote teaching and learning has been based on the assumption that it is done online; while this does not, I hope, jeopardize the validity of my contextual results, it does mean that I only attempted to cover one side of the picture: the privileged side, if I may call it. I should also note that although I tried my best to *objectively* share and discuss the results of this study, I should acknowledge the fact I am discussing this issue (review,

results, and discussion) from a place of privilege. This position has framed the perspective through which I handled the study and most probably limits the study's relevance to underprivileged contexts.

## **5.8 Summary**

In this chapter, I discussed the choices I made in terms of research design. These choices were partly dictated by my philosophical paradigm and by the theoretical underpinning of the study. These choices shaped the methods and tools used for data collection and data analysis. I also highlighted some important considerations that relate to the design of this study, including the theoretical underpinnings, my being an insider, and quality and trustworthiness. In the next chapter, a detailed analysis of the results is presented through the analysis of the TDP activity system.

## **Chapter 6: Results**

Guided by the principles of CHAT, this section provides a summary of the experiences of all 12 participants into one collective activity system. These participants include 4 male participants (MP1-4) and 8 female participants (FP1-8). I had initially decided to discuss the results *after* I share the individual narratives. In these narratives, I offered an exciting account of each participant's development through various stages: pre-Covid-19, pilot phase, during the pandemic, and, if available, future directions. However, as soon as I reached 12000+ words into the collective activity system analysis (this part), I realized that the 25000-word narratives needed to go. It was a very difficult decision, but wearing an examiner's hat (my main target audience), I knew that building my study on CHAT constructs meant that I needed to align my results and analysis closely to the theory, which the narratives did not explicitly do. I also had to prioritize a synthesized account of the results to make the patterns (or lack of) more accessible to the reader. With a very heavy heart, I decided to remove these narratives and try my best to infuse some of the details into the collective summary of the results.

### **6.1 Considerations to note**

This report has been shaped by a few elements that should be considered to properly situate the findings. The first consideration relates to one subtle yet crucial research design aspect that has had a bearing on my interpretation of the results. This study explores the evolving dynamics of TDP with a historically and culturally situated view of the process. This analysis is based on the fundamental understanding that human activity is in a constant state of

flux “being constantly made and remade by a wide range of agencies” (Blunden, 2015a, p. 4), but each developmental stage is significant and should be viewed in relation to its line of progression (pre and post). In this respect, it is important to restate the fact that data used for this study were collected towards the very early stages of TDP in the UAE (March and May 2020) and are generally analyzed with a 2019 backdrop and an insider understanding of the context and the participants. While this analysis is crucial to underpin how the practice of TDP was created as a cultural concept and negotiated as a growing practice, I should stress that by the time this study sees light, the concept *and* practice of TDP will most probably be more developed and more structured in the minds of my participants and in the environment that hosted this activity. This development process is not unique to TDP; rather it is a characteristic of human development. Engeström (2015) explains:

in evolutionary terms, the initial form of learning is that of *incidental (or involuntary) learning operations* that take place as a tacit and casual by-product and by-process of other activities and actions. *Conscious, goal-directed learning actions* are a later and higher formation (p. 30, emphasis in original).

This is why I sought to conduct this study; looking into TDP’s early stages of development is critical in both passive and active ways; by *passively* studying this activity, I hope this modest investigation will provide a critical understanding of how the practice of TDP started and has progressed in its early stages—“everything in time must be understood in its development”



(Bakhurst, 2007, p. 53). On the other hand, the results and observations in the study can hopefully *actively* contribute to shaping the future of TDP and teaching *after* a pandemic—which will most probably be different from the forms of teaching before the pandemic.

Another consideration to keep in mind is the fact that wordcount has affected the detail at which I can report the results or analyze the findings; although I would have wished to highlight all the intricate dynamics that caught my attention, I am restricted by wordcount. Therefore, I had to pick the most relevant and most important findings to report; and this is also why I had to limit supporting quotes for any point/theme to two quotes. This is to stress that the number of quotes does not in any way signify the frequency at which the issue has been discussed or its importance.

Finally, as noted in the research design, participants are referred to as a male participant (MP) or a female participant (FP) to maintain their anonymity. As well, towards the final stages of rewriting the thesis, I found it would be more useful to share supporting quotes from the interviews as figures when there are *two or more quotes* to mark the similarities (or lack of) between quotes used for each point.

## **6.2 Roadmap**

In the following subsections, I highlight how the activity of TDP unfolded by discussing each element in the activity system on its own along with any associated contradictions or tensions. Due to the unique change that happened to *actions* serving this activity, a discussion of the actions that

shaped the activity is then presented. To conclude the chapter, I share a remarkable observation I came to conclude towards the end of my analysis, based on my growing theoretical understanding of CHAT and its various applications.

It should be noted that this chapter highlights each activity system element on its own, which might be considered an unorthodox way of reporting the results of an activity system analysis. Surely there are advantages and disadvantages to this approach. This approach serves the purpose of highlighting the different extents and speeds at which each element in the system has developed or has been affected over the course of the activity. However, one possible drawback of such a layout is that it might make it harder to paint a synthesized picture of the activity system. To alleviate this tension, I made sure to explicitly draw out links between the different sections in the text where appropriate. I also dedicated a section summarizing all noted tensions in the next chapter.

## **6.3 Environment**

### **6.3.1 What is the environment?**

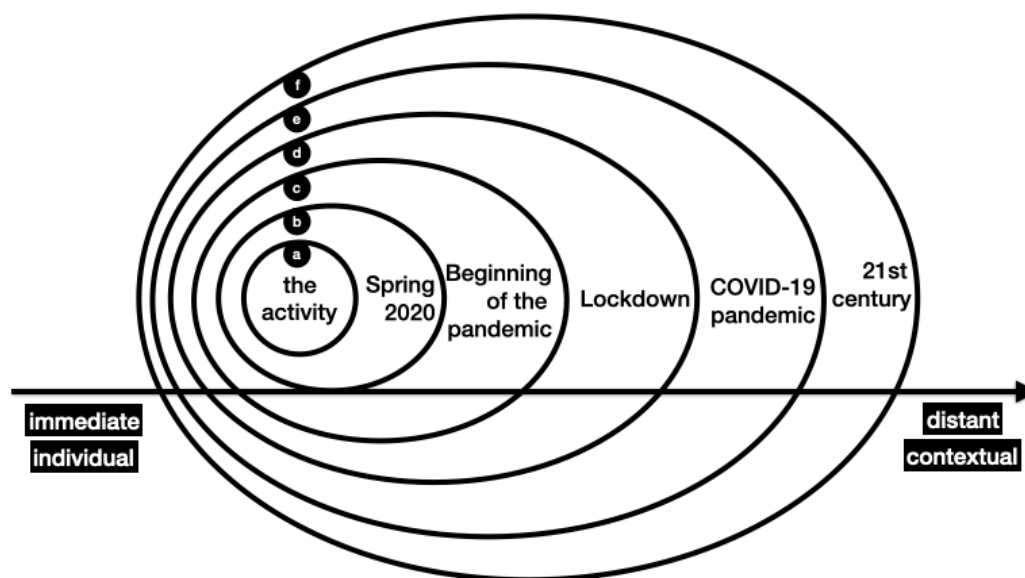
As argued earlier, the more I looked into my data and the patterns they revealed, the more convinced I became that Engeström's activity system model needed to account for time and space, the environment. We can no longer afford to view the environment as a constant or an independent variable that does not have a direct and active involvement *during* the activity and with all elements within an activity. I chose to start my analysis with it

because it clearly sets the scene for the activity, and because, in this study, the environment was the main source of disruption / tensions.

#### **6.3.1.1 Time**

Clearly, the temporal properties of the activity of TDP are what sets it apart from its previous forms at the institute in the past. That is, only after the pandemic started did the activity of teaching at the research site face the need to reconfigure or redefine nearly all of its elements. The pandemic, however, is only one aspect of what defines the time dimension of the environment. Figure 6.1 depicts the defining time boundaries shaping this activity. The first defining time slice is the semester; this slice is a good example of how not all environmental elements will necessarily play an active role during the activity. Put differently, while the term itself has brought in its own defining features, the absence of tensions involving this element preserved its inherited form. Its cultural image remained almost entirely the same: the second semester of the year which is known for more repeating students than the previous semester and for a mid-semester spring break. These two defining features had always had instructional implications that were not affected by the pandemic, they remain the same for future generations of the activity. The change can be seen from the following time slice, the beginning of the pandemic in the country.

**Figure 6.1** The temporal environment of the activity

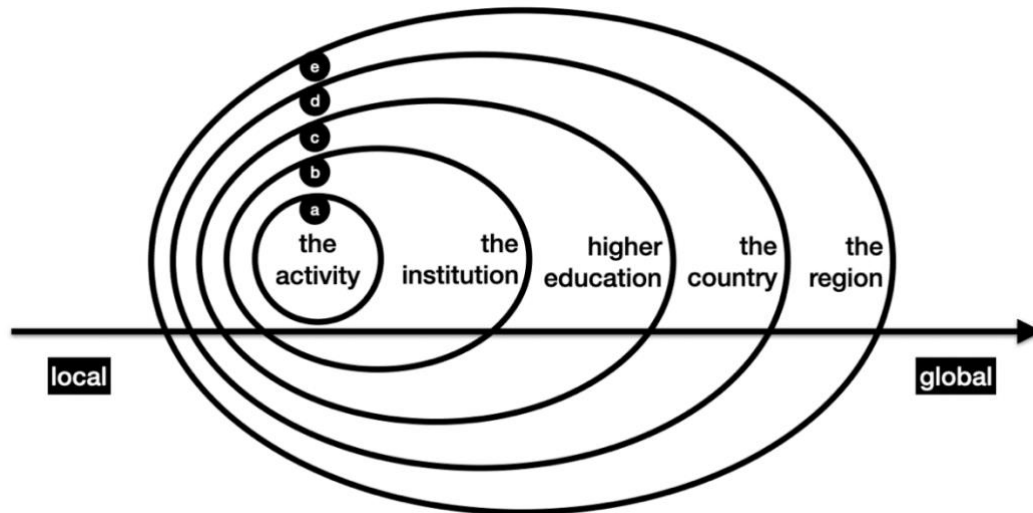


### 6.3.1.2 Space

Moving on to space, as previously noted, I think the spatial environment can be analyzed from three dimensions: a). geographical and cultural place, b). institutional rule, and c). social role of the leading subject in the activity. For the activity of TDP, the most active spatial dimension has been the geographical and cultural place of the activity. Its multilayered nature is outlined in Figure 6.2. The order in which I placed the slices is intentional. Theoretically speaking, I can see this order being inverted in other activities where the conventions adopted in higher education overrule country-specific general rules or practices and hence is placed closer to the global end. However, in this activity, while higher education (slice c) is in fact an *international* practice that is practiced globally, I believe it was heavily restrained by the country (slice d) and the region (slice e) in the process of this activity. These country- and region-specific overriding changes include

the immediate start of the pilot phase early March, the complete shift to remote teaching right after spring break, and government mandates concerning working from home and lockdown.

**Figure 6.2 The geographical and cultural dimension of the activity**



### 6.3.2 How has the environment developed?

#### 6.3.2.1 Time: Sudden and immediate shift

As discussed previously, the Covid-19 snowball started rolling in the UAE on Jan 29<sup>th</sup> when the first case was officially recognized in the country. By that time, the world has already started to show signs of worry, but the strong common belief that “the flu is more deadly” (personal communication with colleagues at work) helped calm many people. Red flags were seen flying (i.e., tensions started forming) when, without prior notice, the Ministry of Education in the country announced on the afternoon of March 2<sup>nd</sup> that a 2-day pilot for a “distance learning initiative” will commence on March 4<sup>th</sup>. This immediate and drastic change did not allow teachers to fully prepare for a

whole new experience as they dealt with the surrounding social panic of the pandemic —"This situation was unplanned and came as a surprise to everyone, so we had to do everything in a hurry" (MP4). While a few participants did not see the sudden shift a problem (Figure 6.3), some participants believed it was not ideal for students (Figure 6.4).

**Figure 6.3 The sudden shift to remote teaching was not a problem**

**Female Participant 8 (FP8) – 2020**

We **did not have enough time to prepare**, but it **went okay**.

**Female Participant 1 (FP1) – 2020**

Actually, it was **better than I expected** because, at first, when they announced this pilot project, I thought, oh, students won't be able to join in, there will be lots of troubleshooting going on, etc. ... And in the first trial, actually, most of them managed to, you know, sign in and use their mics and, you know, communicate with me in the chatbox.

\*emphasis is marked with underlines.

\*similarities are marked in **blue**.

Figure 6.4 Students were not fully prepared for the shift

**Female Participant 2 (FP2) – 2020**

In an ideal world, we would have been given a little extra time to at least inform our students and do a test pilot with them in class before they left for the break. That way they would have had some familiarity with Collab-Ultra. A lot of my students don't know how to/won't turn on the mic.

**Male Participant 1 (MP1) – 2020**

They could have been more successful with some preparation with the students in class beforehand.

\*emphasis is marked with underlines.

\*similarities are marked in blue.

This lack of time to prepare for classes and to prepare students prompted teachers to tread carefully and copy their pre-pandemic teaching activity in an effort to minimize the disruption (Figure 6.5).

Figure 6.5 Changes were kept to a minimum

**Male Participant 2 (MP2) – 2020**

I think I'm going to try and keep it as close to what I'm doing in class as possible. I don't want to be giving my students anything that is new to them, which is going to be difficult for them to, to understand and find.

**Male Participant 3 (MP3) – 2020**

It's like what I've normally done, you know, ... because I didn't want to change anything really, you know what I mean? Okay, we're doing it via computer, but it's still me, you know how I teach. This is what I expect from you. And I just want to keep it the same, you know?

\*emphasis is marked with underlines.

\*similarities are marked in blue.

### 6.3.2.2 Time: Early intensive teacher training

This pilot was immediately followed by a training week and a 2-week spring break, which gave participants time to plan for their upcoming remote classes. Their plans mainly aimed to adapt their teaching methods and lessons to better engage students and address their different abilities and needs (Figure 6.6).

**Figure 6.6 Plans for changes after the pilot and training week**

#### Female Participant 2 (FP2) – 2020

I think that during the two-week online period I will have to change the way I do things and what kind of tasks my students work on.

#### Female Participant 7 (FP7) – 2020

Some students may not understand or stay focused when I'm trying to teach new material, while others will be very focused. They have different ability levels, so I'll have to plan for that.

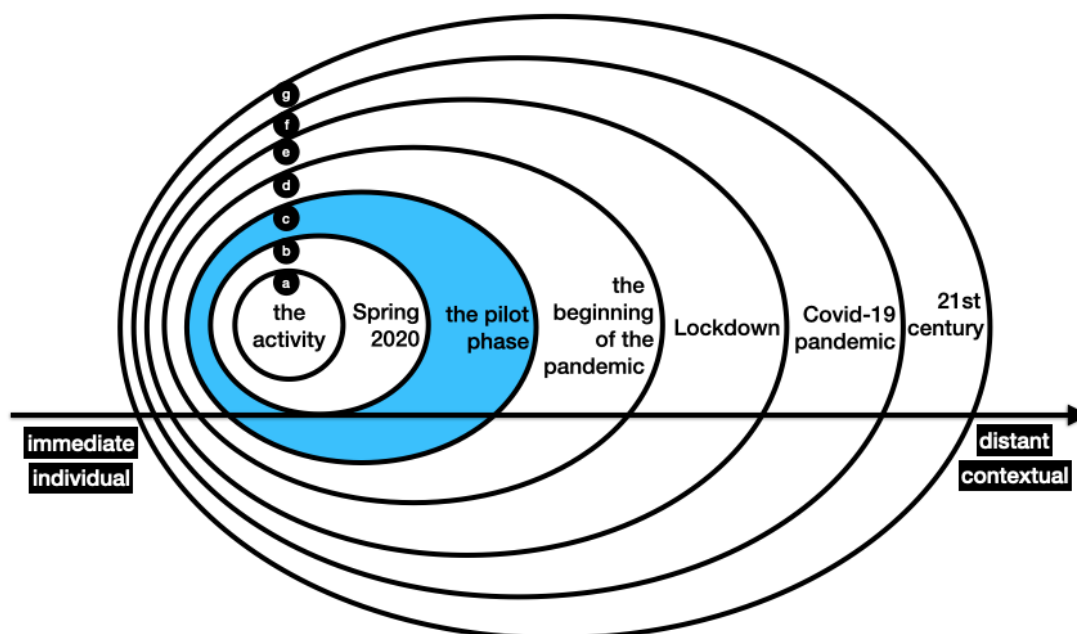
\*emphasis is marked with underlines.

\*similarities are marked in blue.

As well, having had the pilot right before the spring break, the subjects had the chance to be somewhat mentally prepared for the modified delivery mode. That is, the pilot phase can be seen as a sub-time slice between slices b and c, leaving its impact on the activity of TDP (see Figure 6.7). This added time slice came with its own challenges, but it also contributed to the shaping of the activity and it influenced the subjects of the activity the most.



**Figure 6.7 The pilot phase seen as an added environmental element leaving a clear impact on the activity**



### 6.3.2.3 Space: The geographical and cultural dimension

TDP has been greatly shaped by the geographical boundaries surrounding this case study. As noted in Figure 6.2 earlier, the geographical and cultural dimension of this activity contains many slices. Most importantly, the institution itself played an important role in shaping the activity of TDP at the institute. This can be seen in the existing policies and accepted norms, the kind of programs/courses offered, the available resources and community circles to serve the activity of teaching, and the general division of labor. All these elements are heavily dependent on the institution itself and are different in varying degrees from other higher education institutions in the country.

Data from the interviews reveal the effect the country's response to the pandemic has had on their understanding of the virus and their ability to

practice their daily lives. The rules that were imposed in the country (e.g., lockdown, working from home, and travel restrictions) have caused the subjects to rethink their perceptions of the pandemic and develop an emotional artifact as a response to this change: fear of the pandemic and/or fear for their lives. This psychological artifact was created by the subject as a response to these changes in rules in the environment. This artifact had a clear impact on participants' consideration of students' emotional wellbeing. For example, as FP1 reflected on how her expectations of students have developed during the pandemic, she explained:

I showed more understanding to them if they said they missed the class or didn't do their homework due to technical issues. ... I gave them less homework as I knew they were also psychologically suffering from this lockdown phase and had too much on their plates. (FP1)

Another geographical and cultural development, that I nearly missed, was the added, yet invisible, slice to the continuum: students' homes! See Figure 6.8. Teaching remotely, teachers lost complete control over the environment in which students are learning. Learning remotely, each student brought along their own unique environmental slice (household). Students' environments came with their own rules/norms and distractions, and are restrained by their own limitations (physical or emotional); none of which teachers or most students can control. As expressed by some participants, some students do not have the capability to have their own dedicated space for the whole duration of a remote lesson (Figure 6.9).

Figure 6.8 The added environmental layer to the geographical and cultural dimension of the activity of TDP

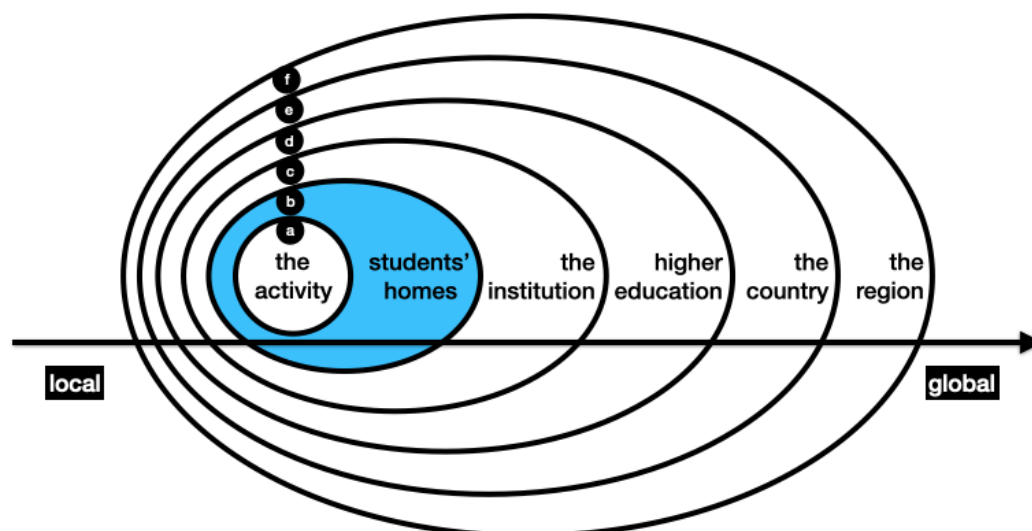


Figure 6.9 Students shared learning environments with family

**Female Participant 2 (FP2) – 2020**

[there is] this assumption that, you know, students have, you know, high speed internet; that they have a stable Wi-Fi connection. I mean, again, if you're a student who has like three or four **brothers and sisters** that are also doing their online classes at the same time, there might be like, your internet connection might be slower.

**Female Participant 3 (FP3) – 2020**

I've got one girl. Bless her. She lets her video and her mic on all the time. **Her family are there.** Her brother Hamed comes and sits on our knee, and he waves to us and talks. So you know, if you had all 24 of them doing that it would be chaos, but because it was just one. He would come in and say hi, and then I would ask her to you know, "okay, he has to leave the room now". Actually, even on our speaking test, we had to reschedule it because there were problems. But again, this is ..it could potentially be a problem for them to have a space that's quiet enough for them to spend two hours engaging with the teacher and classmates.

\*emphasis is marked with underlines.

\*similarities are marked in **blue**.

Teachers, in this case, were left with no choice but to go along with the environment that their students can afford. Going along with these different environments meant that teachers needed to offer accommodations and/or change the structure of their learning activities in untraditional ways (Figure 6.10).

**Figure 6.10 Changes to accommodate the unique learning environment**

**Female Participant 2 (FP2) – 2020**

when that requirement came to be about, you know, students having to turn their cameras on [for attendance checks], I give my students the option of emailing me a selfie with like half of their face covered with an emoji or, you know, with anything just because, like I said, I know a lot of them feel very self-conscious about being on camera or, you know, it's just so not part of their culture to be on camera, you know.

**Male Participant 2 (MP2) – 2020**

So I think people have had to adapt. And if a student is in their bedroom, because they can have privacy, and they need to be able to talk. Then fine. I mean, there's not a lot we can do about that. It's not ideal, but at least you know, with the speaking.

\*emphasis is marked with underlines.

#### **6.3.2.4 Space: The institutional role dimension**

The *institutional role* of the institution has also played a role in shaping the activity. This second spatial dimension defines the kind of control allotted to the institution as a whole and to the individuals within who contribute to the activity. The institution had the power to push forward the intensive training week before teachers went for their spring break, unlike the rest of the country. I believe introducing it before the break gave teachers more time to

contemplate and reflect on their growing understanding of remote teaching practices, eliminating some of the stress to act immediately. Although this *early* introduction was not discussed by participants, almost all appreciated the kind and speed of training they had (Figure 6.11).

**Figure 6.11 Impressions about the efforts of the edtech team**

**Female Participant 5 (FP5) – 2020**

The edtech instructors were very helpful, supportive. We emailed them. They were very helpful. They were still replying even though they were receiving maybe hundreds of emails every day. So I think [institution] did an amazing job with getting us ready for the sessions, PD wise. So I think they did a great job in that sense.

**Male Participant 3 (MP3) – 2020**

The fact that they actually put it together so quickly, it was amazing for me. The edtech team, you know, I congratulate them for that.

\*emphasis is marked with underlines.

\*similarities are marked in blue.

### 6.3.2.5 Space: The social role dimension

Finally, the social role of the subjects of the activity has also created its own sets of restraints and opportunities for the activity. As previously noted, although this dimension is clearly subject-dependent, I chose to view the subject's social role as an environmental aspect because it is heavily, if not solely, dependent on the environment and defines how active the subjects are within the environment of the activity. In fact, a shift in social role has created one of the biggest tensions in the activity (Figure 6.12).

**Figure 6.12 Teachers' inability to be actively involved**

**Male Participant 4 (MP4) – 2020**

I couldn't see their progress; because I couldn't see their body language, I didn't know when they were finished; I couldn't encourage them, keep them on task, or identify problems.

**Female Participant 2 (FP2) – 2020**

In the classroom, I think, I was more involved.

\*emphasis is marked with underlines.

\*similarities are marked in blue.

Prior to the pandemic and when teaching in a classroom, teachers' active social role was seen in many forms: their ability to control the pace of the lesson and flow of learning activities, their ability to not only monitor but also redirect students' progress and involvement in the learning process, their ability—to an extent—to control and limit environmental distractions, and their ability to define and control the expected/needed social engagement among learners in the class. All these forms of active involvement were no longer possible because the environment no longer allowed it, and the burden of these layers of control was transferred to the student.

This imbalance in teachers' social role was further rendered passive when an added layer of control was needed but could not be practiced: the ability to control the presence of other non-class members during the learning process; an element that was rarely an issue for teachers in pre-pandemic learning environments. However, it has now become evidently disruptive, and teachers could not control it, and many students could not, to an extent, eliminate it.

This is all to say that the environment hosting the activity of TDP has

redefined the social role of the teacher making it more passive in terms of its control over the activity and elements within.

## **6.4 Subjects**

### **6.4.1 Who are the subjects?**

The subject in an activity can be “a person or group engaged in the activity” (Hasan & Kazlauskas, 2014, p. 9). While an analysis of activity systems does account for the roles community members play during an activity through the agreed upon division of labor, the identification of a certain person or group of people as the *subject* denotes the perspective through which the whole activity is viewed.

The subjects in this activity are language teachers at a bridge program. That is, they teach students who were admitted into the college without passing the required language requirements. As a result, they join the bridge program to take intensive language classes until they pass and meet the required language proficiency level. All participants in this study have had experience teaching elsewhere prior to joining the institute, but most importantly all have been at the institute (teaching the same courses/program) for more than 6 years. They are all familiar with the kind of students that join the program and with their general needs and expectations.

## 6.4.2 How have the subjects developed?

### 6.4.2.1 The pilot shock

The participants' initial experience with remote teaching in the pilot phase left them with more questions than answers on how applicable or transferable their classroom-based experience is to the new environment. Engeström's (2016) description of human learning illustrates the dilemma that participants faced as if he witnessed it:

Human learning takes place within and between complex, continuously changing activity systems. Learning needs themselves are increasingly opaque. It is not at all clear just what needs to be learned to cope with the demands of complex activities and global networks in constant turmoil. Humans – practitioners, teachers, students – are intentional and interactive beings who keep interpreting and reinterpreting the challenges and tasks they face in their own, multiple, changing and often unpredictable ways. They do not neatly obey the laws of linear causality. (p. 209)

At first, as participants shared their experiences, it seems that some of them set their expectations at a similar level to pre-pandemic classrooms. They attempted to follow a similar style to their pre-pandemic classes, partly to avoid overwhelming students with many unknowns, but mainly hoping that it would flow smoothly given that their classrooms were laptop-mediated *and* mostly online. How different can that be from a completely online and remote lesson? Very, they found out (Figure 6.13).



**Figure 6.13 Remote teaching offered a completely different teaching experience**

**Female Participant 6 (FP6) – 2020**

The passion of teaching. I used to be passionate about standing there and just get, you know, you felt more important. I'm not degrading remote learning in any way. On the contrary, I take off my hat to all the people who do online teaching because seriously, for real, it's a lot of work. I mean, we'd always think that they are at home relaxing. No, they're not. They are really working, but the prestige of being a teacher is not there in remote learning. We've turned into machines that give assignments.

**Female Participant 1 (FP1) – 2020**

It wasn't a natural form of lesson delivery and I found it very challenging to engage all students in class discussions and activities although I had only 9 of them.

\*emphasis is marked with underlines.

Participants found remote classes very different because teachers can no longer do many tasks, including:

- see students' non-verbal cues
- interact freely and instantly with students
- walk around and check on students' work
- identify students who need assistance or further explanation
- provide instant and targeted support to students, even without asking
- be in control of the environment and its distractions

Participants reflected on *old* practices that were much needed but no longer handy (Figure 6.14). All of these changes in the environment, division of labor, and artifacts, promoted teachers to go through a turbulent process of “restructuring of mental processes as a result of development in a cultural

environment” (Kaptelinin & Nardi, 2012, p. 17). Although the pilot phase is long gone, many of its tensions were left unresolved and were carried into the next phase of remote classes. These tensions will be discussed in their sections, but what I would like to highlight here is how these changes affected the subjects and how they were promoted to redefine their approach to teaching.

**Figure 6.14 Teachers reflecting on old practices that cannot be utilized remotely**

**Female Participant 1 (FP1) – 2020**

the individual support we can offer to our students, especially at lower levels, when we are face to face with them, reading their body language, listening to their concerns and answering to their questions.

**Female Participant 6 (FP6) – 2020**

And things can come up in the middle, and we can drift away from our lesson in the classroom. In the online, I don't think we can drift as much because there's less interaction with students. The only interaction is them doing the work.

\*emphasis is marked with underlines.

### 6.4.2.2 Redefining their approach

The changes that teachers experienced as they engaged in TDP for the first time rendered a lot of their teaching practices unusable or inapplicable. Their established teaching practices and understanding of effective engagement with students were no longer fully applicable in this new environment. FP2 was not sure anymore if her style is suitable—“I’m always wondering like if what I’m doing is good enough,” and some participants felt their teaching styles had to be adapted (Figure 6.15).

Figure 6.15 The effects of remote teaching on teachers' teaching style

**Male Participant 1 (MP1) – 2020**

I think the negative impact [of remote teaching] is my interaction with students. I mean, I'm a very, I don't know, a theatrical teacher, and I do perform when I'm in class, and I find this has been... this has affected how I teach and my teaching style. It's much more difficult to interact with my audience.

**Female Participant 7 (FP7) – 2020**

While I like to think that my teaching style is generally student centered, I think that my remote teaching style is less interfering than it is in a face-to-face classroom context. I'm forced to let students get on with things independently while in the classroom context I would actively check that students were on task and intervene if they weren't. I'm forced to trust the students to do things rather than checking they have.

\*emphasis is marked with underlines.

\*similarities are marked in blue.

This shift in perception is a form of mediation “by culturally produced artifacts that are created historically through human practice” (Hedegaard, 2007, p. 258). That is, this reconceptualization was driven by the different tensions arising within different elements in the activity: their role as a teacher in class (division of labor), the tasks they can accomplish during a lesson (actions), the kind of learning activities they can integrate (division of labor), the way they evaluate the effectiveness of e-learning tools (artifacts and rules), and surely their experience with previous forms of the activity (artifact and environment). All of these tensions poked holes in what used to be a solid form of teaching, and accordingly, led teachers to question their own understanding of teaching and look for ways to adapt.

Looking at CHAT principles, two principles or concepts can be seen in these transformations. Firstly, this shift in perceptions of teaching exemplifies the development of what Vygotsky called *higher mental functions* which “are distinguished by their mediation by external means” (Bakhurst, 2007, p. 53). The newly acquired and developed concept of TDP is an understanding that, as Vygotsky asserted, “first emerge[d] as distributed between the person and other people... and only then as individually mastered by the person” (Kaptelinin & Nardi, 2012, p. 14). That is, teachers’ understanding of TDP did not develop internally first; it was rather first experienced with others (students, colleagues, administration, etc.) and only after experimenting with it socially were they able to develop a solid understanding of it that can be internalized and appropriated. This appropriation is a result of “their ability to actively respond to environmental factors” (ibid., p. 22) and as a result of a “strong will demonstrated by overcoming obstacles” (Sannino, 2015, p. 6). Leontiev discussed such transformation and believed it reflected people’s *responsiveness*; that is, individuals’ ability to actively “develop their own internal and external responses using their own energy” (Kaptelinin & Nardi, 2012, p. 22) in response to the environment.

The other CHAT principle or understanding that I clearly see in these transformations is the idea of utilizing prior experience as an “embodied standard” (Kaptelinin & Nardi, 2012, p. 23) or a point of reference in the process of forming a new *concept* or understanding a new experience. The concept of TDP was never known to teachers, not in a sense that they had experienced this decade. Teachers’ understanding of the concept grew and

developed showcasing their ability to “appropriate concepts already existing in their cultures. *The concepts, however, have not always been there.* They are a result of the positive and negative experiences of people who contributed to the development of the culture” (Kaptelinin & Nardi, 2012, p. 23, emphasis added). The creation of this new concept (mental artifact) was mediated by participants’ previous experience with teaching which acted as a mental point of reference; a scale that “emerged as a generalization of the individual experience of using the tool” (ibid.), the tool here being the activity of teaching. This act of generalization, as Engeström (2016) proposes, “is at the root of learning” and it is “based on identifying and mastering variation” (p. 39). Instead of starting from square one, teachers generalized their previous experience and used it as a starting point, as an artifact that needs to be further developed to address the needs of the new form of the activity. Through a process of trial and error (appropriation and mediation), the participants along with their community appropriate a new societal psychological formation of a new concept (the practice of teaching during a pandemic); they still are in the process of doing so. This new concept or new understanding will be “an embodiment of abstract concepts based on the generalization of both individual and collective experience” (Kaptelinin & Nardi, 2012, p. 23), and I would also claim that this new concept will also reflect development in what Leontiev (1978) termed as *social consciousness*. He deemed this kind of consciousness essential for the development of individuals’ own consciousness, creating a new “internal plan” (p. 43) for this pandemic-upgrade of reality. This creation is based on the idea that our social consciousness was not initially equipped with a “pandemic mode enabled”

understanding of reality. It was never a possibility that needed to be entertained, and so individuals did not even anticipate the need for entertaining the idea of what teaching during a pandemic could mean. Hence, the concept was born contextually, and then individuals (re)internalized the concept as they negotiated its dimensions with others. I believe the concept is yet to be fully internalized.

#### 6.4.2.3 Trying to cope with the changes

Although many teachers are still trying to renegotiate their conceptualization of teaching during a pandemic and effective remote teaching practices, they had to start finding ways to cope with these changes to maintain the activity. Surely, experimenting was one of their first strategies to cope with changes in the teaching environment (Figure 6.16).

**Figure 6.16 Teachers needed to learn on the go using trial and error**

##### Male Participant 1 (MP1) – 2020

We're learning as we go along, picking up snippets here and there on how to improve.

##### Female Participant 5 (FP5) – 2020

I had to discover Collaborate on my own. There's still a lot more to discover, but I mean, it's not that difficult. But it was a good learning experience. That's why in class, everything I try, I tell them: 'I'm new at this. Let's try it together,' because I was learning.

\*emphasis is marked with underlines.

Other changes concerned the wellbeing of the subjects. Roth (2007) asserts, “there are inner relations between emotion and practical activity that make the

former a constitutive element of the latter” (pp. 45). He (2009) further explains that to “capture the activity system as a whole”, a researcher should account for the emotions and needs of the individual at action levels and the “collective needs and emotions” at the activity level (pp. 70-71). His observations can be clearly seen in this study.

Participants’ mental and emotional wellbeing and that of the community influenced their ability or capacity to undertake the activity of teaching. The frequent and notice-free changes that were enforced by the environment and the administration (community) along with the urgent need to figure out how to effectively navigate a different teaching experience have left teachers overwhelmed and overloaded, burnt out. Relying on colleagues for support was not as readily available or accessible as it used to be when working from campus, whether technical or emotional:

I feel very detached from my colleagues. For example, I mean, seeing you every day it's the highlight of my morning. You know, arriving at work, having a coffee and, you know, some chat if I had a problem, you were there, you would help me. So feeling isolated and that I know they're there. ... Even if it's through the working day, you don't know if they're available. If they want to talk to you, if they're sleeping, you know, if they're in a bad mood, it's very different. It's very different.

(FP3)

Some attempted to fill the gap by meeting regularly on Zoom while others found WhatsApp a suitable alternative (Figure 6.17).

**Figure 6.17** Communication e-tools were utilized to replicate the office environment

**Female Participant 2 (FP2) – 2020**

At the same time, it can be like pretty lonesome. And you know, it's great being in the office and like having a coffee with my colleagues having a laugh, sharing a joke, you know, having a chat about, you know, what's happening in the classroom, what's happening at the college, what's happening in the world... what I mean by getting emotional and psychological support, like I've been zooming pretty much every week with [name removed], sometimes we'll do like a conference call with [name removed] and [name removed]. And like, we kind of try to, like, you know, bring back that culture that we had in the office, and it really does make a difference. You know, and like, we vent and like, we share our concerns and like, yeah, and we laugh and yeah, so I think to answer your question, like my colleagues have been indispensable throughout all this, really. They've really made it a good experience.

**Male Participant 2 (MP2) – 2020**

Having WhatsApp and the informal communication it offers—as opposed to the more formal college email—has made a big difference. We can chat and offer support and ask for and offer help with tech issues etc. I think it has also brought us closer as a team.

\*emphasis is marked with underlines.

\*similarities are marked in blue.

But a few had limited communication options. MP2 explained: “I haven't really been in contact with my colleagues or the teaching side of things. ... I have been updating and sharing materials ... but with actually sharing ideas, and what's been working. I haven't really heard from anyone”. When asked how different this was from pre-pandemic days, he elaborated:

I think it would have been a lot different. I think if we were in college, and even if we were, you know, doing online classes, then we would, I guess there would be more sharing and asking people for advice and



how do you do this and do that, what's worked, what hasn't worked. I don't know what your experience has been, but I feel that there's been less sharing. (MP2)

## **6.5 Objects**

### **6.5.1 What are the objects?**

Following Leontiev's (1978) firm belief that "behind activity there should always be a need, that it should always answer one need or another" (p. 45), Engeström (2016) highlights the importance of the object in an activity system, "the sense and meaning of actions are attached to the object of an activity, and the identity of any activity is determined by its object" (p. 122). The object of an activity is what "distinguishes one activity from another" (Foot, 2014, p. 333). Such objects are normally defined by the needs felt and set by the community, and are accordingly continuously being transformed or redefined by the culture seeking/hosting it. Blunden (2010) explains: "human life is distinguished by the fact that the objects of activity and the needs which the objects satisfy are no longer natural objects and biological drives, but rather artifacts and needs which are themselves products of human activity" (p. 175). This aspect and Foot's assertion that "an object is never fully accomplished" (2014, p. 334) explain the fact that an object in an activity system, as Nicolini (2013) clarifies, is "partly given and partly emergent" (p. 112). It's an endless cycle of rebirth! This is one of the exciting aspects of change and development in an activity system, as I see it; it demonstrates how everything in an activity, even the essence of it (its object), is subject to change as the subject and community respond to arising needs and

changes—“because systems are dynamic, the object embedded in a system is not static and may be subject to changing interpretations, which, in turn, work back on the system to produce systemic change” (Edwards, 2009, p. 199).

Another important aspect that should be acknowledged when discussing objects is its collective nature. As Roth (2014) explains, “the subject actively and consciously orients in the world and towards its transformation for the purpose of meeting a generalized, collective (societal) need. When it appears as if there was no collective object, the researcher is required to uncover it” (p. 6). However, CHAT assumes that not every individual participating in an activity is aware of the object. Sannino et al. (2018) explain, “a single actor can only grasp some aspects of the object, so it is typically difficult to articulate by an individual. An object is contested and often also fragmented” (p. 117).

During the activity of teaching at the research site, it has helped that the management has clearly articulated the intended object of teaching: helping students pass their courses. This object is clear to the community members, but it is to some extent contested by teachers who believe that their focus should also be directed towards improving students’ language skills as a primary object. This contention often leaves teachers with the tension of balancing the management’s clearly stated object with what teachers believe should be the object of teaching. Prior to the pandemic, the activity of teaching was determined by two direct objects, which were inspired by the way management evaluates the success of the program and/or courses in the

program. Table 6.1 outlines these objects and breaks them down into some of the commonly associated actions with these objects (a detailed account of actions associated with the activity is provided in *division of labor*). Surely, these represent a *typical* form of the activity which was not necessarily always the case, given the highly-contextualized and dynamic nature of human activity and learning itself; each classroom, each lesson presents teachers with a different set of needs and tensions to address.

**Table 6.1 The objects of teaching prior to the pandemic**

Object	Actions	Assigned to
Prepare students to pass the course  <i>(determined by the institution)</i>	Plan for lessons	Teachers
	Prepare for lessons	Teachers, department
	Design engaging learning activities	Teachers, department, edtech team
	Deliver lessons	Teachers
	Support students (learning, emotionally, financially, etc)	Teachers, students affairs, counselors
	Utilize technology for learning	Teachers, edtech team, IT support
	Troubleshoot tech problems	IT support, teachers (optional)

Improve students' language skills  <i>(determined by the profession)</i>	Assess students' needs and starting proficiency level	Teachers, department
	Measure students' understanding	Teachers
	Give feedback	Teachers
	Use authentic language	Teachers
	Implement an effective language teaching strategy	Teachers
	Provide students with chances to practice the language / apply the skills	Teachers
	Prepare materials that address students' language learning needs	Teachers, department
	Assess students' progress and improvement	Teachers, department

### 6.5.2 How have the objects developed?

#### 6.5.2.1 No longer wholly/fully collective?

The main motive or direct object driving the activity of TDP has not changed, cannot change: prepare students to pass course assessments and improve

students' language skills (in that order). The change can be seen in the indirect motives of the activity. Before I go into the details of these observed changes, I should note that contrary to what I stated at the beginning of the section, I see the need to argue that data in this study suggest that the objects that were set for the activity of TDP were no longer fully controlled or solely determined by the community at that time (March-May 2020). I believe this is because as the pandemic unfolded, everyone within the community at every level of the hierarchy did not know with certainty what to expect/change, what was the best course of action, or what the community members needed or should have—"So I think that's something hard especially because I think we're like in what is it uncharted territory? You know, none of us have really like done this before" (FP2). While the general *collective* need for *all* human activities at the time was to *stay safe*, how this need translates in relation to this specific activity was not clear to anyone at that time, not clear enough for professional bodies or even society to have a clear sense of "do's or don'ts" or "keep or abandon" measures.

Teachers were left to translate how this pre-pandemic object—*students passing the course*—could be maintained alongside the new pandemic-driven global object of *staying safe*. I believe this was one of the main causes for the burden felt by teachers: they were left with a great responsibility to define how teaching during a pandemic should be, without clearly set guidelines or instructions, whether by the profession or by the institution. Not only that, but also as few (sometimes contradicting) instructions and guidelines started to roll out later in the semester, teachers were left struggling to renegotiate or

redefine what they had already worked really hard to figure out and establish up until that point.

Looking at this conundrum from a CHAT perspective, I believe this unclarity caused an imbalance in the division of labor, as will be discussed in more detail later. That is, as our understanding of the pandemic increased, so did the *actions* that were needed to maintain the newly-introduced object (staying safe) *and* to manage the restrictions it imposed on the old object. I believe this led teachers to a). redefine some old actions (after a lot of renegotiating), and encouraged them to b). prioritize actions that were not previously deemed necessary or a priority. Starting with redefined actions, a good example is the action of measuring students' understanding and the action of supporting students' learning needs. Prior to the pandemic, as FP4 explains, teachers and students were more easily accessible, and as stressed by many, a simple walk around the class during a learning activity was a powerful tool that teachers utilized to accomplish many actions: check on students' understanding, monitor students' progress, identify and support students who are struggling, and adjust the learning activity to be more responsive to students' needs. This was no longer accessible, and teachers had to be creative in finding ways to replace this psychological artifact: walking around class or simply standing at the back.

Actions that were brought to the foreground of the activity of TDP included: managing e-tools to deliver and manage a remote lesson (teachers), accounting for and supporting students' emotional stability and wellbeing (teachers), troubleshooting and fixing problems with connectivity and remote

learning tools (teachers), and taking responsibility for one's own learning (students). This last action caused one of the biggest tensions for teachers in class as they found that students were simply not ready for such a shift (Figure 6.18).

**Figure 6.18 Teachers found students not ready for the shift**

**Female Participant 4 (FP4) – 2020**

Our students are not ready for that [remote learning]. You need a lot of discipline for online classes. This is something our students have always lacked. They're spoon fed everything. They haven't learned to be independent self-learners. So they need discipline. They need that independence, you know, they need to, to be more focused. Yes, they still need guidance. That's where we come in. But it's very difficult to guide them when we don't see them.

**Male Participant 1 (MP1) – 2020**

I hate to put our students down. Yeah, the kind of students we have, but they are not autonomous. They need a very hands-on approach.

\*emphasis is marked with underlines.

\*similarities are marked in blue.

Other participants believed students' lack of readiness for this kind of learning and this sudden shift was due to lack of needed skills, whether technical, language or even study (Figure 6.19).

Figure 6.19 Students lacked crucial skills to be ready for remote learning

**Female Participant 2 (FP2) –2020**

Our students haven't really done this before. .... So, like, we assume that yes, they're going to be able to, like, catch on quickly, and I feel like for a lot of my students they have, um, but still, I have some students, and I don't know if it has to do with the fact it's a language thing, a language barrier, or it could be like a special need, or it just could be that they were not born with an iPad in their hands. Um, I think they found like the online classes and 100% edtech to be to .. I think it just was too much for them. Like they really struggled. They really, really struggled. I think they relied heavily on their classmates to explain to them like what to do and how to do it.

**Female Participant 8 (FP8) –2020**

My [course name] students are already quite weak in English, and their attention span seems to have gotten worse. I have to repeat info many times and send emails, but they're not all paying attention. They already did not have great study skills before. Now that they are studying from home, often from their bed or living room with other siblings around (many of them do not have a quiet study space at home), the lack of study skills and study environment contributes to them not being able to concentrate very well on the lessons.

\*emphasis is marked with underlines.

\*similarities are marked in blue.

The implications of this will be discussed in the community section, but in terms of *objects*, I believe the need for *teachers* to focus on these actions *during class*, instead of delegating these actions to other community members as was the case prior to the pandemic, made the activity of teaching a very demanding process for teachers, and made achieving the object less community-based than it was before, I think.



### 6.5.2.2 Changing priorities

I would also argue that this unclarity made it possible for some *goals* (that drive *actions*) to be transformed into *objects* driving teachers' decisions and planning throughout the activity. This transformation happened as a response to environment-imposed tensions and through a process of externalization and mediation. As explained earlier, an *object* is "what connects individual actions to the collective activity" (Engeström, 1999, p. 31); *actions* are "conscious processes directed at *goals* which must be undertaken *to fulfill the object*" of the activity (Kaptelinin & Nardi, 2012, p. 30, emphasis added); these goals ultimately contribute to the overall motive of the activity, but, as suggested by CHAT, might not be clearly connected or related to the object of the activity.

As I analyzed the interviews, what became clear to me was the fact that teachers became more concerned with *tracking* students' work than they were in 2019. In fact, almost all participants intentionally chose and looked for trackable activities and assignments in 2020 (Figure 6.20), and nearly none mentioned it in 2019.

**Figure 6.20 Teachers highlight the need for trackable tasks**

**Male Participant 2 (MP2) – 2020**

I felt that I wanted to be able to see that they actually were participating the whole class. So I thought that was important. And plus, again, you know, I had a record of those students who were actually participating in the class. And another thing, obviously, usually in class, you'll be able to walk around and see if they had answered any of the questions and if they're getting anything wrong, or telling them that they need to actually do the activity, and I couldn't do that. So that was difficult.

**Female Participant 1 (FP1) – 2020**

I started using more "trackable" online lessons than before to be able to "see" how well they are performing in certain language skills.

\*emphasis is marked with underlines.

In 2019, when participants shared their thinking behind planning for their lessons and creating learning materials, none of them mentioned the ability to track students as a factor to look for or as an issue to consider. I had asked three questions which could have revealed this interest if available. These questions were:

1. What are the factors that you consider when you decide to create your own learning materials instead of using existing materials (or vice versa)?
2. Walk me through the process of creating/choosing learning materials for your classes. For example, consider:
  - 2.1. What do you start with? What considerations do you keep in mind?

2.2. How do you decide which tool to use?

2.3. How do you assess the usefulness of these learning materials?



3. Are there any design/layout/presentation considerations that you keep in mind when you create and/or choose learning materials for your classes? —Please elaborate

Even when I tried to search for “track” in all the data from 2019, the only “track” I found was: “for listening mp3 tracks” (FP2, 2019)! Surely, the factors they considered in 2019 were still applicable in 2020, including: students’ proficiency levels, students’ needs, students’ culture, students’ interests, assessments, and the teacher’s teaching style. However, these interests were not questioned or affected by the tensions arising during the activity, so they remained internalized as is. Tracking, on the other hand, was foregrounded as an issue that needed more attention: “When inner contradictions are conscious, they become the primary driving forces that bring about change and development within and between activity systems” (Roth & Lee, 2007, p. 203).

This transformation probably signifies how participants redefined teaching in a remote context. This focus on tracking, as I see it, can be traced back to a few sources: a). the PDs offered by the institution in the training week, b). teachers’ inability to see students *actively* involved in the learning process, and c). the need for record keeping. In addition to sessions offered specifically targeting the technologies used to deliver remote classes, the edtech team offered two new training courses on repeat. See Figure 6.21. While the edtech

team has always offered courses to sharpen teachers' technology-mediated teaching skills, tracking never had the spotlight prior to the shift to TDP. Taking these courses prior to remote teaching during the pandemic, I believe, oriented teachers to the need to provide trackable work, whether for "interactive" class or "flipped" ones. There is also the possibility that these courses were offered based on teachers' demands or requests. Both ways, teachers ended up feeling the pressure to keep endless records of students' participation and "active involvement" throughout the lesson and the semester.

**Figure 6.21 New PD courses offered for teachers at the beginning of TDP**

<p>Teaching with Technology</p> 	<p><b>Creating Trackable Flipped Classroom Content</b></p> <p>This course will introduce the participant to 5 learning technology tools that they can use to effectively implement the flipped classroom teaching approach. Each of these tools can track the students' progress through the content to ensure there is learner accountability and to help the instructor decide on what they should cover in the next lesson based on learner comprehension.</p>
<p>Teaching with Technology</p> 	<p><b>Adding Interactivity in your Online Class</b></p> <p>This course will provide learners an overview of the interactive tools in Blackboard Collaborate Ultra, as well as, introduce additional tools they can implement to ensure students are attentive and engaged during their online class.</p>

Lastly, I believe another source for teachers prioritization of tracking is the fact that they can no longer see their students to gauge how effective the learning experience is, and they needed ways to prove that students are completing the work. The only measures they seem to have had were limited to tracking and offering engagement opportunities in which students were clearly held accountable for their active involvement or lack (Figure 6.22).

Figure 6.22 The rationale behind utilizing trackable learning tasks

**Female Participant 6 (FP6) – 2020**

The only interaction is them doing the work. ... Number one, they're all trackable. And you can all see that everybody's working. I mean all these applications and websites or whatever, they're all trackable, and we can see what they're doing.

**Male Participant 2 (MP2) – 2020**

I want to be able to see that they are actually doing the work and those you know, who weren't doing it at least I had evidence. Okay, so this student failed, or, you know, she wasn't.. she hadn't done any work for the last four weeks.

\*emphasis is marked with underlines.

\*similarities are marked in blue.

## 6.6 Artifacts

### 6.6.1 What are the artifacts?

Artifacts, or tools, are not static entities. Rather, “CHAT views tools as crafted at a point in time and adapted over time: Their development is shaped by the needs, values, and norms of the culture(s) in which they are created and used” (Foot, 2014, p. 331). As maintained by Blunden (2010), “social activity is possible only thanks to the use of artifacts of some kind (including words and images, but also land, etc.) with which people identify themselves and each other” (p. 101). One of the unique aspects that I highly appreciate about CHAT is the way it views artifacts; they are not seen as static tools that just serve a purpose or mediate an activity, but they are, more importantly, “cultural resources” (Engeström & Miettinen, 1999, p. 8) that carry history and reflect the acquired *psychic images* that are culturally created and attached to

these tools—“cultural tools thus are both inherited and transformed by successive generations” (Rogoff, 2003, p. 51). This view of artifacts entails an important conclusion: artifacts are not static objects; just like the activities they mediate, artifacts are constantly transformed and developed during and because of human activity. Take phones as a perfect example; they initially were viewed as tools that facilitate voice calls; over time, as our intellect and culture developed, phones transformed in the process and reached a point where they represent a comprehensive tool that has replaced so many functions that used to be served by other tools. As a result, phones have developed and become a central device without which many cannot picture their lives. For some, it is not even used for making calls anymore. With this understanding of artifacts in mind, any analysis of artifacts in an activity system must account for “the historical, social, and cultural context as well as issues of control and power” (Murphy & Rodriguez-Manzanares, 2014, p. 13).

To understand the development of artifacts in this activity and the tensions around them, one must first be familiar with the existing pool of artifacts made available to the subjects in the past. The institution, among a few in the region, is one of the leading institutions in technology adoption for educational purposes. The institution took on the iPad as the main delivery tool for their language bridge program in 2012 (Gitsaki et al., 2013; Hamdan, 2012), and teachers and students were expected to learn and get ready for using the tablet in class in a very short time. This meant transforming all learning materials to iPad-friendly forms, looking for and using apps that support language learning, and acquiring the skills needed to operate an iPad in

general and for learning in specific. The initiative was meant to promote a “paperless” classroom; a dream that I believe was too far-fetched which could explain why the iPad initiative did not last, and laptops replaced tablets soon after. Discussing these changes is beyond the scope of my thesis, but I bring this progression up to explain how this path of e-tool integration has created a unique culture among teachers at the institute as all teachers involved in this study were at the institute from its iPad days. I believe it has created a culture that values the integration of e-tools in the teaching and learning process, but also understands—to an extent—that different technologies come with different educational affordances and limitations. They have seen how different devices (and tools) affect the teaching and learning process in unique ways. A quick example concerns the portability of an iPad as compared to a laptop (size, weight, need for a charger, etc.). This feature influenced how teachers utilize devices in activities that require students to move around or to engage with each other. I also believe that the rapid changes with device integration created the illusion at the administration level that throwing a device or a tool at teachers and students at any time/speed should not be an issue—they can just go with it. I am not saying they don’t eventually go with it, but the amount of struggle, effort, training, and time needed for this to happen is often undermined and overlooked as subsidiary. With this culture and orientation towards e-learning tools in mind, teachers at the institute were familiar (not necessarily comfortable) with the concept of sudden and immediate changes when it comes to e-tools used in the classroom. However, what was entirely new this time was the fact that this change was not limited to the scope of artifacts; instead, it affected the

environment, the community, the rules, the division of labor, and even the objects.

### **6.6.2 How have the artifacts developed?**

Because artifacts played a major role in this activity, I struggled with finding a comprehensive way to discuss how they developed and how they created/responded to the activity system's tensions. Therefore, I am going to approach the analysis from two angles: one from my perspective as a teacher, and the other is based on a CHAT perspective. As you will see, the need for both angles is warranted as it helps explain the dynamics from an educational perspective that might go unnoticed when focusing on CHAT only.

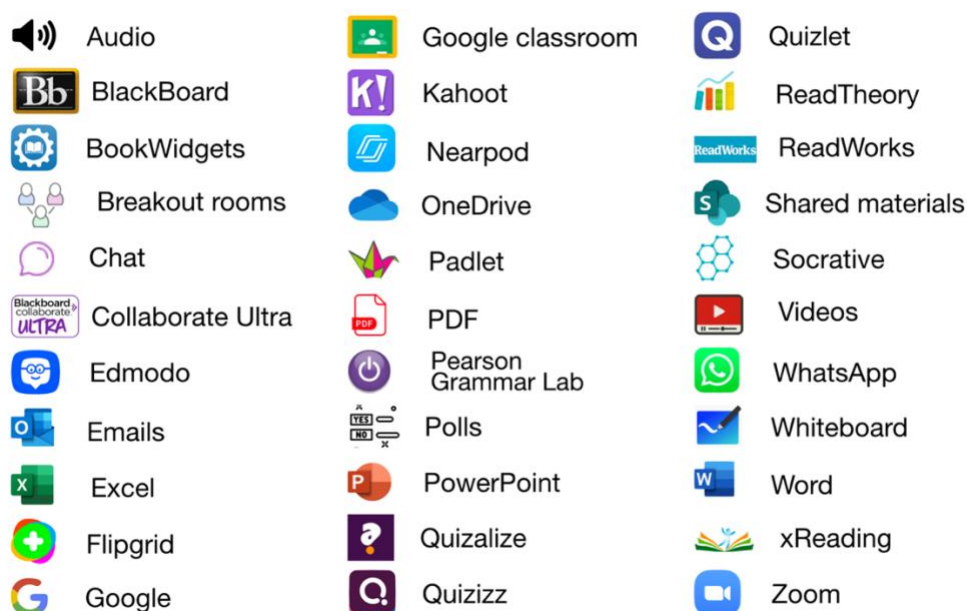
To begin with, and at the risk of sounding technocentric, I believe artifacts played an important role in this activity as the subject and the community tried to respond to tensions caused by the pandemic. Teaching and learning would have had to come to a sudden halt had it not been for the technologies that enabled remote learning, the skills individuals (teachers, students, support teams, etc.) have developed in laptop-mediated classrooms, and the technological infrastructure at the institute that was previously built to support laptop-mediated classrooms. It is true that one might argue that they were not enough, and as MP4 stated, "no tool will be effective if students aren't interested". Nonetheless, there is no doubt that they, at least, formed a good starting point that enabled the transition. Whether or not the transition was smooth, this is another issue.



### 6.6.2.1 A teacher's perspective

e-Tools that were mentioned in 2020 interviews are listed alphabetically in Figure 6.23. While most were already part of pre-pandemic classrooms, some were newly integrated although not necessarily new to the system (i.e., they were always there but never utilized), such as: Collaborate Ultra, Google classroom, and whiteboards. FP6 said, "I've been making use of applications I've never made use of, like Padlet and these things. I mean, I do use them, but now I *constantly* use them."

**Figure 6.23 e-Tools used by participants while TDP**



As well, among participants, there was the general impression that having been teaching laptop-mediated classrooms for some time has provided teachers with ample support: they had a bank of online resources, they knew and already used many tools that can facilitate remote learning, and their students were familiar with many important/basic e-tools needed to function in

a remote learning environment (e.g., the learning management system and online games).

Although some participants believed they made “no changes” to their materials or ways to use e-tools, as they explained their engagement in TDP, almost all of them said at one point or other “I just...”, and they would explain how they modified, changed, or adapted their use or their materials. MP1 explained:

You have to think about how you're going to get the work from the students, how you're going to give them the feedback. So there's, there's lots of planning around materials, not just what you're going to put up on Blackboard. (MP1)

These changes that MP1 and other participants felt were needed were a response to what they saw was affecting the teaching and learning process in this new remote environment: students and teachers do not have access to one common screen (environment & artifacts), teachers cannot see or monitor students or their progress (division of labor and environment), teachers have limited access to non-text forms of communication from students (rules/environment and artifacts), and the internet speed/load is not equally reliable for everyone involved in the lesson (artifacts and environment).

To address these changing circumstances, participants made some changes to their materials or to the way they use e-tools in class. Their focus seemed to be on a few factors. One common factor teachers focused on was the need

for tracking, as previously explained, and the need to offer students an accessible way to submit their work as FP5 explained:

We already have all the materials. So what only changed was having to work a few extra hours to create folders on OneDrive, or just adding links on to OneNote. Maybe links for submission, tables and keeping track of completed goals. (FP5)

Another common factor was the need to become more organized and detailed (Figure 6.24).

**Figure 6.24 Teaching remotely had an impact on the way lessons are organized**

**Male Participant 1 (MP1) – 2020**

I found the one thing that I do now on Blackboard is, you know, before I just had week one, week two, week three, **whereas** **now** I'll have week one, and in the information box, I'll cover everything that we'll be doing in week one. And then when they go in, they'll go into Sunday. And before they click on Sunday in the information box, it will say exactly what we're going to be doing on Sunday. So I find mapping out the lessons and explaining the lessons in much more detail for the students.

**Female Participant 6 (FP6) – 2020**

[This experience] **made me more organized** because I have to be extremely organized. I have to know what's 1, 2, 3, 4. You can't wing it like when you're in a classroom. You have to be well prepared.

\*emphasis is marked with underlines.

\*similarities are marked in **blue**.

Finally, some also believed the content needed to be altered to offer smaller chunks or a certain kind of, what they believed was, online-friendly activities (Figure 6.25).

Figure 6.25 Materials were modified to suit remote lessons

**Female Participant 8 (FP8) – 2020**

Sometimes I will modify materials **by reducing the number of exercises** if I think there won't be time to fit it all in a lesson. Whenever there's a chance, I have [students] answer MCQs or True/False as polling questions in Collaborate.

**Male Participant 1 (MP1) – 2020**

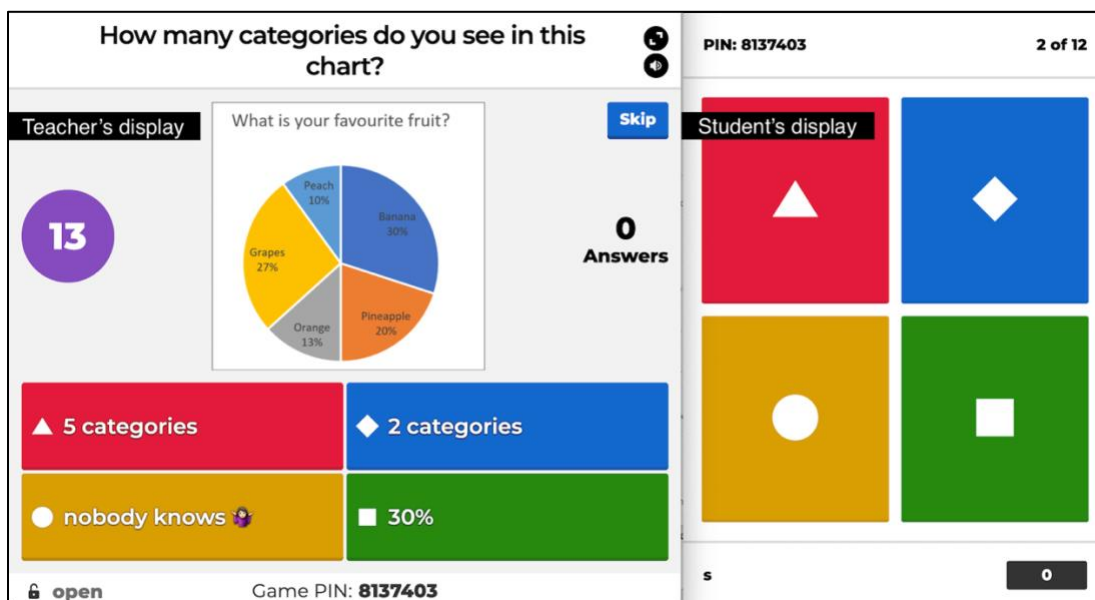
[Materials] have to be easy. They have to be simple. They have to be quite short. I find some of these book widgets that are available are very long. And the students, my students anyway, they tend to get bored halfway through, they won't completed or they won't completed properly.

\*emphasis is marked with underlines.

\*similarities are marked in **blue**.

Tool providers also stepped in to address these global changes by updating their services and adding remote-friendly features. For example, Kahoot used to be a provider that facilitated games that require students to see what is displayed on the teacher's screen to answer each question (see Figure 6.26). This proved to be problematic because each question is timed, and time lag is very common in video conferencing, so students ended up missing questions simply because they could not see the question before time passed. Kahoot introduced a self-paced learning option where teachers can assign a game without the need to refer to the teacher's device. Questions and answers are displayed on a learner's device. The teacher can still see how students are progressing, but students can no longer *compete* as they did in the original format of the game. Other tools like BookWidgets introduced live tracking of students' progress. While these updates and many others have probably served the activity of TDP, they also came with their own challenges.

**Figure 6.26 How an original Kahoot game is displayed on different screens**



Another way to resolve these roadblocks was to utilize different tools to serve functions that were starting to emerge or become more problematic than before. For example, involving students or engaging them in class became a very problematic issue. FP7 offers an explanation that resonates with others:

I have changed / modified many of the activities to try and make them more engaging and inclusive, not because they were so very dull before (I hope) but because I feel it's important that the students feel part of the shared learning experience. By which I mean they need to feel that they are still part of a class and are contributing. Apps such as Padlet, Kahoot, Socrative and Quizziz can help with this because they can see their contribution and attribute some value to it rather than being anonymous and passive. (FP7)

Teachers found that without their deliberate and conscious attempts to engage students more frequently in class, their classes will easily turn into

ghost towns. Not that they didn't eventually many times, but they still put more effort and more thinking into how to engage students more visibly and more actively. This is why engagement as a psychological artifact, I believe, has changed a lot in response to the new demands of this environment. It was always an important element of teacher planning and an important issue to look out for in class; however, in TDP activities, the concept of engagement or student interaction had to be redefined in drastic ways.

Finally, one last point to address from a teachers' perspective is how the functions that e-tools served were slightly different during the activity of TDP. As I read through the interviews, I concluded several functions served by e-tools a). in classes during the pandemic (CDP) and b). to support the activity of TDP in general. See Table 6.2 and Table 6.3. Although these functions were always part of the picture even prior to the pandemic, based on my understanding of 2019 and 2020 data, the priority of these functions and the way they can be best served has changed due to the changing dynamics of TDP. One example can be seen with presenting content to students; it has become a function that is restrained by the lack of direct and visible interaction with students. Another interesting observation is how some e-tools became obsolete *or* more relevant for different functions. For example, supporting students was a function that was primarily done face-to-face, in class or after class, based on what teachers shared in their interviews. However, due to the remote nature of TDP, different tools were prioritized: chat, Zoom meetings, and emails. Although all of them were available before, they were not utilized as the primary source of support like in TDP. I have to

say, however, that these alternatives were not as effective as needed. One of the main concerns, as will be shared in the division of labor, was teachers' inability to provide support to students as much as they would have liked or as much as they believed was needed despite the availability of these tools.

**Table 6.2 Functions served by e-tools used in CDP**

	Functions	Teachers' use	Examples
A	present content	deliver or explain a lesson	Collaborate Ultra; Nearpod
B	distribute content	provide students with materials or links	BlackBoard; Google Classroom
C	involve students	provide students with opportunities to be actively involved in the lesson as compared to only passively receiving information	Kahoot; Breakout rooms
I	track students	keep track of students' progress and whether or not they are on task	Nearpod; BookWidgets
D	check for understanding	check for students' understanding of	Socrative; Polls

		information covered during a lesson	
G	change the pace	change the pace of a lesson to ensure students are engaged	Quizlet; Nearpod
E	receive from students	receive content from students	OneDrive; Padlet
F	give feedback	give feedback to students	Collaborate Ultra; Zoom
J	support students	provide students with additional support	Chat; Zoom

**Table 6.3 Functions served by e-tools used to support TDP**

	Functions	Teachers' use	Examples
H	create materials	create their own materials	BookWidgets, Socrative
K	find or share materials	search for or share materials	BlackBoard; Google
L	share materials and resources	share materials and resources	BlackBoard; Shared materials bank

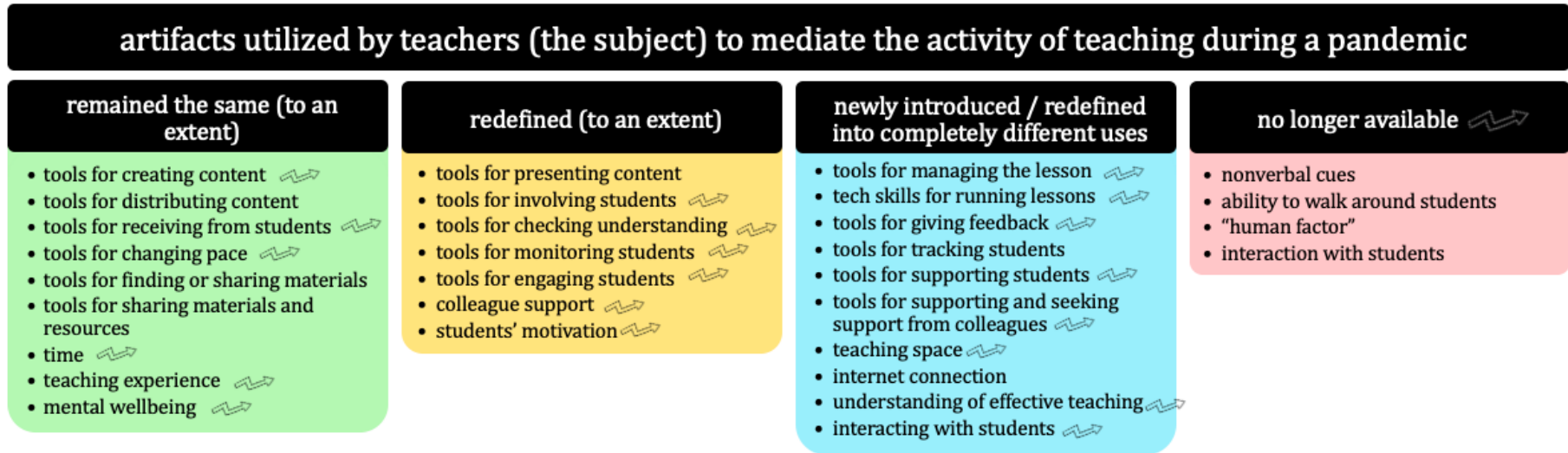


M	support and seek support from colleagues	support colleagues and seek support from them	Email; WhatsApp
N	acquire the needed TDP skills	develop skills needed for TDP	Yammer; BlackBoard

### 6.6.2.2 A CHAT-based analysis

A good starting point for discussing the development of artifacts is to highlight the ones utilized in the activity by the participants. It is important, therefore, to first start with grouping them into meaningful categories to discuss how each category developed (or not). At first, I attempted to use Susi's (2006) synthesis of Wartofsky's (1979) and Engeström's (1990) classifications of artifacts, but as I restudied the data, I found their categories overrode what the data had to say. Put differently, they did not allow me to highlight the interesting dynamics that played out during the activity. I concluded that a more suitable way to categorize the artifacts was to identify them in terms of the change they were subjected to (see Figure 6.27). Given that my aim was to study the development of the activity, it seems more relevant to look at artifacts in terms of how much change or renegotiation they were subjected to, including the change of appearing in/disappearing from the activity. I think these categories encouraged me to go beyond the surface level of understanding these artifacts: how they were used.

Figure 6.27 Artifacts utilized by participants during the activity



a tension was present during the activity of teaching during a pandemic

### **6.6.2.3 No longer available artifacts**

Starting with the most exciting category “no longer available”, I will highlight some of the important artifacts whose absence was felt by participants during the activity of TDP. Although they were sometimes highlighted in my “what did remote lessons fail to replace?” question during the interviews, many of these artifacts were discussed throughout the interviews. The best example for this is one of the most frequently noted artifacts: nonverbal cues. These cues were used, as they reflected, to check on students’ attentiveness, interest, confusion, and general attitude. That is, teachers utilized the psychological artifact of nonverbal cues as signals to help them decide when they needed to change the pace of a lesson, readdress a certain point, or approach a student to assist or support somehow (Figure 6.28).

**Figure 6.28** The absence of nonverbal cues which served as crucial psychological artifacts during a lesson

**Male Participant 4 (MP4) – 2020**

No visual/video link to students definitely limits our ability to deliver an effective class.

**Female Participant 6 (FP6) – 2020**

I miss [seeing] the confusion in my students' faces if they don't understand something. I can't do that anymore. For example, if I explain to them a writing lesson, no matter how much I explain, if a student doesn't understand, it shows on her face. And then you can go to that person but here I can never find this person unless she identifies herself, and unless I know the students who are weak ones. This is something else. But for the rest, I won't have one who will say I don't understand because they think their questions are stupid and don't want to look dull in front of their friends.

\*emphasis is marked with underlines.

\*similarities are marked in blue.

These nonverbal cues were also present in 2019 data. When asked how she assessed the effectiveness of her materials, FP6 explained in 2019:

By looking at the students' reaction. In other words if the students are working on it and asking questions I think I did a good job if I see lack of interest in do the activity then I know I need to change something about it. In addition, I never look at the good students I focus more on the disruptive and lazy ones 😊. (FP6, 2019)

Additionally, almost all participants considered the ability to walk around class and monitor students' progress (live/in action) an artifact whose absence made it difficult for them to practice their role as a teacher (Figure 6.29).

**Figure 6.29** Walking around class was another important yet absent artifact

**Male Participant 2 (MP2) – 2020**

I can only help so much. I can't stand over them and tell them to do the work... And, it's just like, you know, it was difficult trying to have the [same] kind of impact that would help their learning that one would normally have in the classroom. ... obviously, usually in class, you'll be able to walk around and see if they had answered any of the questions and if they're getting anything wrong, or telling them that they need to actually do the activity, and I couldn't do that. So that was difficult.

**Female Participant 2 (FP2) – 2020**

In the classroom, I think, I was more involved... I'm getting up and I'm checking on students, and I'm walking to students, and asking/answering questions and following up, you know, that students aren't like consistently on their phones.

\*emphasis is marked with underlines.

\*similarities are marked in blue.

As they explained, participants reflected a belief that part of a teacher's division of labor in class is to check on students' progress, check on students' ability to interact with the content and other students, and ensure that students get the help and support they need during the lesson. These roles were highly dependent on teachers being able to monitor students in class. One way to address this need was the use of *tracking* as an electronic replica of monitoring students in class. However, the remedy did not always work as seen in Figure 6.30.

**Figure 6.30 Trackable tasks were not enough**

**Female Participant 1 (FP1) – 2020**

My students were not in front of me. I couldn't read their body language, walk around to check their work, sit with them individually to give feedback.

**Female Participant 8 (FP8) – 2020**

In a face-to-face lesson, I often walk around the classroom to ask [students] if they need help, encourage them to be on-task, have [students] work in pairs or groups. Sometimes we'd play a game in class that required [students] to move around, like Running Dictation or a board game where they have to throw dice.

\*emphasis is marked with underlines.

\*similarities are marked in blue.

The last two missing artifacts, “human factor” as named by FP1 and the ability to interact with students, are to a great extent similar, but as I looked at the data, I found they have subtle differences. When teachers discussed the absence of *human factor*, the discussion highlighted the emotional toll of being alone in a class talking to a motionless device (Figure 6.31), and this absence has left an impact on the teacher-student relation (Figure 6.32).

Figure 6.31 The absence of the "human factor" in remote classes

**Male Participant 2 (MP2) – 2020**

I wish the students had turned on their, their microphones so that, you know, I didn't feel that I was talking to myself, and perhaps wasting time as well just waiting for someone to answer where they could answer, you know, immediately.

**Female Participant 5 (FP5) – 2020**

[Remote classes] failed to replace the human interaction, face to face human interaction. The smile you can see on the faces of the students, jokes and fun that we make in class.

\*emphasis is marked with underlines.

Figure 6.32 The inability to interact with students was felt by teachers

**Male Participant 4 (MP4) – 2020**

At this point, it has failed to replace positive teacher-student interaction and effective classroom/learning management. The best students will always do OK and be independent, but the others need motivation and encouragement and I don't think I'm able to give that remotely.

**Female Participant 4 (FP4) – 2020**

I missed the interaction. I miss being able to give a student a look, you know. I miss seeing a student struggling with the work. I miss seeing students working together.

\*emphasis is marked with underlines.

\*similarities are marked in blue.

While they did not seem to attempt to remedy the absence of the human factor in class, many teachers tried to replace their inability to check on students with frequent checks. They asked more questions or added more "check for understanding" points, but this proved to be ineffective for a few reasons: not everyone would respond, it took a lot of much-needed time, and

it was just exhausting to keep asking questions, giving polls, and prompting students to respond in time:

I found myself talking and eliciting more than usual. My students were not in front of me. I couldn't read their body language, walk around to check their work, sit with them individually to give feedback. So, I found myself constantly calling out their names, checking for understanding and repeating information. That was exhausting. (FP1)

#### **6.6.2.4 Newly-introduced or completely-redefined artifacts**

Tensions in other artifacts are all very much interconnected. For example, tensions caused by the lack of nonverbal cues, the lack of the ability to see students' progress, and the inability to interact with students prompted participants to redefine how content is created effectively for the lessons, how students can be engaged and involved in a remote environment, how to gauge students' understanding and motivation, and how to identify struggling students and support them. For example, tools for supporting students prior to this activity were not technology-dependent. Teachers met students in person to assist and address their concerns. This was no longer possible, and teachers needed to resort to other means to provide this support, but these means were not always productive (Figure 6.33).



**Figure 6.33 Remote support offered by teachers was not always as effective**

**Female Participant 8 (MP8) – 2020**

With remote learning, I can only ask [students] verbally if they need help or in the Chat during a Collaborate session. Even if I send private chat messages to ask individual [students] if they need help, many of them are not responsive.

**Female Participant 4 (FP4) – 2020**

She failed, and I felt really, really bad. And one of the reason she failed was she didn't produce anything for her research project. And that was a big chunk of her final grade. I couldn't tell her. I reached out to her several times. She didn't do anything. If we were in the classroom, I felt I could have had more influence.

\*emphasis is marked with underlines.

### 6.6.2.5 Redefined or remained the same

One very common note made by participants was their appreciation of the shared materials bank that was established some time prior to the pandemic. This bank was made up of materials vetted by a committee dedicated to organizing, collecting, populating, and inviting others to populate the bank. They also have a set of guidelines or criteria for creators to abide by when creating materials and for any materials to be added to the bank. These guidelines helped establish a standard of quality that can be trusted by teachers. While this bank was surely helpful all along, it was instrumental for the activity of TDP because it allowed teachers to dip in the bank and easily search for content that could work in this new environment. FP4 explained:

Honestly, I really didn't have time to modify a lot of materials. I felt time was of essence. It was exhausting. And that's why I looked for things

which were ready to be available on our database, things that I had, that I've used in the past which I thought might work. As for modification, very little was modified. I just found that choosing what's suitable was more appropriate for me. (FP4)

## **6.7 Community**

### **6.7.1 What is the community?**

A community, as Rogoff (2003) explains:

involves people trying to accomplish some things together, with some stability of involvement and attention to the ways they relate to each other. Being a community requires structured communication that is expected to endure for some time, with a degree of commitment and shared though often contested meaning. A community develops cultural practices and traditions that transcend the particular individuals involved, as one generation replaces another (p. 80).

Engeström (2016) asserts, “how the community is defined and bounded depends on the concrete historical form of the given activity system” (p. 123). In a pre-pandemic setting, the activity of teaching involved a multilayered community of students, colleagues, department head, division head, assessment committee, support teams, management. As will be discussed in the division of labor, the ties shared with these layers vary in vertical and horizontal ways, and each layer served its own purposes in the activity of teaching (see Table 6.4).

**Table 6.4 Community members participating in the activity**

Community member	Power relation	Presence in the activity
students	vertical	active
colleagues	horizontal	active
department head	vertical	mostly active
division head	vertical	passive
assessment committee	horizontal/ vertical	passive
support teams (counsellors, edtech team, IT support, facilities)	horizontal	passive / active
management	vertical	passive

## **6.7.2 How has the community developed?**

### **6.7.2.1 Students**

Access to students, the most important community member in this activity, has changed drastically in this emerging form of the activity. As noted earlier, the inability to see students posed a challenge for teachers. Even more challenging for students was the absence of other students, the absence of a visible student community; by visible I mean physically and visually accessible. This absence was felt by many teachers (Figure 6.34).

**Figure 6.34 Students lost access to their peers**

**Male Participant 4 (MP4) – 2020**

Although I was watching online and encouraging them, it seemed to have less effect than if we had all been in the same room. Motivation is contagious it seems. If students don't see others working, they are less inclined to self-start.

**Female Participant 4 (FP4) – 2020**

In the classroom, they had their peers to engage with or help them, but online they don't.

\*emphasis is marked with underlines.

While some of this is further discussed in the division of labor, the effect observed by participants can be explained by Vygotsky's theory of zone of proximal development. As previously noted, Vygotsky viewed the development of our consciousness, or our minds, dependent on culture and society; this view shaped his understanding of learning: "human learning presupposes a specific social nature and a process by which children grow into the intellectual life of those around them" (Vygotsky, 1980, p. 88). This led him to propose the zone of proximal development which reflects "the essentially societally mediated nature of human learning" (Tolman, 1999, p. 75). The zone represented the scope of a learners' ability to further develop from point a (the current developmental level) to point b (the potential developmental level) when presented with a problem. This kind of development is best supported (and can only be reached) when a learner is guided by adults or interacts with a "more capable peer" (Vygotsky, 1980, p. 86). "An essential aspect of this interaction is that less capable participants can participate in forms of interaction that are beyond their competence when

acting alone” (Cole & Wertsch, 1996, p. 254). The assistance of others can be manifested in many forms including their mere presence, dialogue and imitation—“using imitation, children are capable of doing much more in collective activity or under the guidance of adults” (Vygotsky, 1980, p. 88). With these means of social interaction, a learner develops their higher mental functions *by internalizing* what they have been experiencing in a learning context; in fact, as affirmed by Chaiklin (2003, p. 43), “it is not the competence per se of the more knowledgeable person that is important; rather, it is to understand the meaning of that assistance in relation to a child’s learning and development”—that is, their ability to appropriate and internalize this knowledge. This internalization, it should be noted, in Vygotsky’s terms, is not viewed in a simplistic manner that is limited to a simple process of, put in modern terms, copy and paste. However, the process of internalization is viewed as a complex process in which a learner renegotiates the observed social interaction/influence in ways that suit their own bank of previously accumulated internalized learning activities before they can fully assimilate the newly acquired experience (Bakhurst, 2007; Vygotsky, 1980).

Participants echoed Vygotsky’s understanding that less able students need more guidance or assistance than more advanced students. In fact, one of the commonly reported issues was teachers observing a more negative effect of remote learning on weaker students mainly because they could not elicit help from their peers or receive help from their teacher as readily (Figure 6.35).

Figure 6.35 Students' need for peers during a lesson

**Male Participant 2 (MP2) – 2020**

students working together, you know, because not only [are students] learning from the teachers, they're learning from each other. They're learning from, you know, other people's mistakes, or things that other people do well. They're asking each other for advice, you know. Maybe some of my students are not so.. find asking the teacher for help so easily, so they'd much rather ask someone who's sitting next to them. So yeah, I'd say their overall learning experience has been hampered by the fact that they're not with each other.

**Male Participant 4 (MP4) – 2020**

Borderline students were left to their own devices and didn't have the model of other students working. Weaker students couldn't rely on stronger classmates.

\*emphasis is marked with underlines.

\*similarities are marked in blue.

While many students were disadvantaged by pandemic-driven changes, others got a chance to shine, whether they were hardworking students (Figure 6.36) or shy ones who would normally be less active in class (Figure 6.37).

Figure 6.36 Hardworking students took advantage of the new experience

**Female Participant 7 (FP7) – 2020**

Students who work hard and are engaged, have found it easier to focus and learn without the distraction that disruptive students in a classroom cause. I believe their ability to learn has been much improved by remote learning.

**Male Participant 4 (MP4) – 2020**

Other teachers have said, and I agree, that remote learning has highlighted the divide between motivated students, who are usually on task, and high maintenance students, who are often distracted and off task.

\*emphasis is marked with underlines.

\*similarities are marked in blue.

Figure 6.37 Shy students became more involved

**Female Participant 1 (FP1) – 2020**

I think some of them, especially introverted ones, seized the opportunity well and worked harder than before. They attended all the lessons, kept our communication active by sending emails and asking questions. This served their nature well.

**Male Participant 1 (MP1) – 2020**

I find students that are not as confident as other students in class, they tend to be more confident here on online teaching because you can't see them. You can't look at them. They don't really need to speak that much. If they want to say something, they can type a message.

\*emphasis is marked with underlines.

\*similarities are marked in blue.

### 6.7.2.2 Colleagues

Another very important aspect to discuss in relation to the community is *colleagues*—“speaking to my colleagues -best source of knowledge I know” (MP3). Being an insider, I am very aware of the unique dynamics this community of colleagues had prior to the pandemic. The team has always been supportive and engaged — “We just have a very good support system. So people feel comfortable; if they don't understand something, they're having trouble with something, they can ask for help, and they can reach out” (FP2). Working in cubicles in an open space, someone from the department is always a few steps away. The echoey dome in the building makes it easier for anyone in the area to contribute to any conversation from their desks. This atmosphere, in addition to the dominant “sharing is caring” mentality, invites members in the department to depend heavily on each other on a daily basis: to ask about updates or recent emails, to inquire about tests or materials, to seek advice or support for using e-tools or certain lesson plans, to pitch ideas for feedback and possibly support, and to just take a break and chat. From March until August (after data were collected), access to this community was limited to emails, Zoom meetings, phone calls, and the newly-formed WhatsApp group (Figure 6.38).



**Figure 6.38 The role colleagues played during this phase**

**Male Participant 3 (MP3) – 2020**

I would be facing a problem, and I'll like, what am I supposed to do this, and then somebody would.. it would pop up on WhatsApp, you know, and then we'd all chip in, or whoever's figured it out, would chip in, you know.

**Female Participant 8 (FP8) – 2020**

Colleagues in both [X and Y] departments have been very helpful in sharing ideas, tips, and materials by email. So many great ideas were shared that I already have several things to check out before next semester, such as FlipGrid and BookWidgets Live.

\*emphasis is marked with underlines.

These means of communication were highly appreciated, but at times limited and not always easily accessible (Figure 6.39), and some thought that although the WhatsApp group did start off as a useful tool, it lost its magic (Figure 6.40).

Figure 6.39 Access to colleagues was limited at times

**Male Participant 2 (MP2) – 2020**

I think if we were in college, and even if we were, you know, doing online classes, then we would, I guess there would be more sharing and asking people for advice and how do you do this and do that, what's worked, what hasn't worked. ... I feel that the there's been less sharing.

**Male Participant 4 (MP4) – 2020**

No access to colleagues; we have WhatsApp, but you get a lot of info from informal chat at work.

\*emphasis is marked with underlines.

\*similarities are marked in blue.

Figure 6.40 The development of the WhatsApp experience

**Female Participant 3 (FP3) – 2020**

I thought at first, the WhatsApp group was a positive thing. I did believe that it was a positive thing. But now I'd rather not use it. It can cause confusion, and a little bit of frustration. And I think, yeah, I think I'm using the group less than I did originally.

**Female Participant 4 (FP4) – 2020**

As we got into online learning, that WhatsApp group.. At the beginning again, it was very useful. You know, it was a quick way for people to share their concerns to share feedback on something that they did, but it got out of hand. And I dreaded waking up in the morning and finding 120 messages from that group. It was a lot. It was a lot to go through.

\*emphasis is marked with underlines.

\*similarities are marked in blue.

### **6.7.2.3 Other community members**

Finally, the absence of community members whose presence or contribution was passive, as explained in Table 6.4, did not affect the activity or subjects as much, mainly because their passive presence prior to the pandemic was limited to electronic means: emails and Zoom meetings. That is with the exception of the IT support team. They used to offer their support from an IT corner on campus for teachers and students to visit when they needed IT help. They were also a phone call away when help was needed in the classroom; an IT person would visit the class to address the issue. As soon as remote teaching started, the IT department across campuses sent out links to dedicated Zoom meeting rooms for teachers and students. When a person visits the meeting room, they are put in a waiting room and then assigned to an IT person who will answer their questions, assist with any problems, and take control of the teacher/student's screen if needed. In a way or another, this arrangement made IT support even more accessible and faster to reach than before.

### **6.8 Division of labor**

As I looked closely at the way classes ran during the pandemic, one of the first imbalances that was vividly colored by these interviews was concerning the division of labor (DOL) in the activity; that is, imbalances in the division of labor aptly explain why teachers became overwhelmed with tasks that would normally be (co-)assigned to other community members. Due to the remote nature of the new environment and how suddenly the shift took place,

teachers were left juggling more than they can handle, more than they should. Surely, this kind of imbalance did not cause the burden alone; as previously discussed, this imbalance in DOL came along with other imbalances during the lesson, which teachers also had to figure out, deal with, and evaluate their soundness on the go.

### **6.8.1 What is the division of labor?**

To serve the collective need of an activity system, CHAT posits that the individual in an activity works within a community “to meet social needs, but in different roles differentiated by specialty (areas of expertise) and authority (within some hierarchy)” (Bligh & Flood, 2015, p. 146). This *division of labor*, in CHAT, is seen as a mediator through which the community and the subject negotiate their roles and responsibilities in an activity. As Foot (2014) explains, this division is “understood as what is being done by whom toward the object, including both the relatively horizontal division of tasks and the vertical division of power, positions, access to resources, and rewards” (p. 331). These horizontal (specialty) and vertical (authority) distinctions are mostly pre-determined by the environment and rules/norms shaping the activity. However, as Hatano and Inagaki (1991) mention:

characterizing a relationship as *horizontal* does not exclude the possibility that some members are more capable than others at some given moment. It only means that roles among members are changeable in interaction. Thus the vertical-horizontal distinction

should be taken as a continuum rather than a dichotomy (p. 278, emphasis in original).

Another variety to be accounted for in the division of labor is the kind of role served by this division, an aspect I believe is mostly discussed in a positive light in CHAT-based studies, that is mostly supportive and additive. By *kind of role* I refer to what Rogoff (2003) describes as different relations: “Different participants have different roles and responsibilities, and their relations may be comfortable or conflictual or oppressive” (p. 80). In other words, as she shares, the participation of community members does not necessarily always contribute in a *supportive* manner to the activity; “they also engage in conflicts, disputes, and intrigues, as seems inevitable when people’s lives are connected and the future of the community is a matter of intense interest” (pp. 80-81). These conflicts and disputes should not, I contend, be seen as ill-intentioned acts of disruption, but, as CHAT posits, should be seen as necessary drivers for transformation. That is, as subjects of an activity try to resolve conflicts and disputes arising with other community members (through the division of labor), they attempt to find ways to adapt the activity to sustain the division of labor without jeopardizing the activity flow.

In addition to viewing the division of labor as a continuum of power *and* kind of role, one should also consider its dynamic nature in an activity system. During the course of an activity, the division of labor might shift in response to tensions arising during the activity, causing another layer of tensions sometimes. These shifts and resulting tensions are very much evident in this study.

## **6.8.2 How has the division of labor developed?**

DOL in a learning context, as Murphy and Rodriguez-Manzanares (2014) state, can be seen “as the locus of control in the context of learning, the centrality of the teacher or student” (p. 12). In a classroom, DOL can be analyzed on different levels: teacher-student, student-student, and student-teacher. These different levels serve different purposes and are almost never identical in any classroom due to their highly contextualized nature; the context that defines these variations is shaped by the teacher’s teaching style, the content of the lesson, the group dynamics, the environment, and the norms and rules governing the activity.

### **6.8.2.1 Teacher-student**

In this activity, not being in the same physical environment placed many restrictions on teachers’ ability to maintain an effective DOL, in a similar sense to pre-pandemic classes (Figure 6.41).

**Figure 6.41 Some traditional forms of division of labor were ineffective**

**Female Participant 1 (FP1) – 2020**

Normally, I do "individualised" learning as much as possible in my classes. Students decide what they want to study that day. I sit with them individually or in small groups to check their progress and tutor them privately. This was not possible during this period. I had to design a lesson that would benefit all at the same time. It was difficult to follow students doing different tasks all at once.

**Male Participant 4 (MP4) – 2020**

I was a bit taken aback by the lack of motivation and self-direction. Although I was watching online and encouraging them, it seemed to have less effect than if we had all been in the same room.

\*emphasis is marked with underlines.

As previously discussed, teacher-student relations were affected because teachers were not able to provide assistance and support as readily and easily as before, and students either did not respond to teachers' elicitation or did not ask for help:

I feel that I have less influence on my students' learning, you know, because you miss that one-to-one help that when you're going around a class, you know, 'can you just check that out?' or 'have a look at number one'. So I felt that I hadn't been able to help them as much as I can if, you know, we were in a classroom. (MP2)

Even when students responded, it was different: "you know, it's very difficult going through the answers to things via message" (MP4). Class participation was also restricted (Figure 6.42).

**Figure 6.42 Student participation was not as active remotely**

**Female Participant 8 (FP8) –2020**

There are always some [students] not participating even if I'm calling their name out loud during a session. In a face-to-face class, if I called on a student to participate, she usually would feel pressured to do so [because] she's in class with all her peers

**Female Participant 4 (FP4) –2020**

Many of them are just shy in general, but in the classroom, you know, there are ways of getting students to speak. With online, there's no way. "Make me", you know. You can't make them. So the fact that many of them didn't speak to me during the class. All of them.. or none of them had their videos on. That was challenging for me. There was no again engagement, you know, interaction. That's the thing that's missing the most from these online classes.

\*emphasis is marked with underlines.

\*similarities are marked in blue.

Giving feedback was also an issue participants discussed concerning teacher-student relations. Some believed that TDP has restricted their ability to give effective feedback the same way they could not offer support to students, due to lack of time, big number of students/assignments, and lack of immediacy as before. However, surprisingly, a few found this shift in dynamics enabled them to improve their practices concerning giving feedback (Figure 6.43).



Figure 6.43 Giving feedback to students remotely

**Male Participant 4 (MP4) – 2020**

Nothing has really changed in my style although I have become more conscious of giving positive feedback. Students can't see my body language and maybe I feel that students aren't listening, or aren't understanding without the F2F element. I'm sure I gave positive feedback in the classroom, but I have become more deliberate about it online. I put something in the chat with the student's name and maybe an emoji.

**Male Participant 1 (MP1) – 2020**

I find my feedback is better now because it's more individual. And I can set maybe the class or task and then I can talk to students individually, maybe put them into a group and talk to them there and we can have a look at their essays. So I don't know, I just find generally my feedback is more organized, I guess, you know, like in the classroom, you'd go around and give a little sentence here, a little sentence there. Whereas now it's more focused.

\*emphasis is marked with underlines.

### 6.8.2.2 Student-student

In the same manner, student-student connections were greatly affected as well—"In a classroom, serious students model appropriate learning behavior for others and there is a teacher to monitor student learning, but without cameras we can't recreate the same experience" (MP4). Students no longer have immediate access to each other as before, and this has not only affected student-student tasks (groupwork and peer support), but also teacher-student tasks:

in class, you'll explain something, maybe once. And then one of the students. Yeah, so half the students will get it, and they'll be able to

lean over and explain to the other students exactly what we're doing. And that doesn't happen online. And so you'll find yourself explaining the same thing three times and in slightly different ways, but more or less the same thing. And I get angrier and angrier as I'm doing, and the students wonder, "please, sir why are you angry?" (MP1)

### 6.8.2.3 Student

A very unique finding, I concluded from the data and my analysis, is how the dynamics of TDP changed the conversation from teacher/student-centered classrooms to teacher/student-dependent classrooms. Before I explain what I mean, I would like to share a few quotes in Figure 6.44.

**Figure 6.44** The dynamics of remote classrooms

#### Female Participant 7 (FP7) – 2020

I think that my remote teaching style is less interfering than it is in a face to face classroom context. I'm forced to let students get on with things independently while in the classroom context I would actively check that students were on task and intervene if they weren't. I'm forced to trust the students to do things rather than checking they have.

#### Male Participant 3 (MP3) – 2020

And it's just like, you know, it was difficult trying to have the kind of impact that would help their learning that one would normally have in the classroom, and I just have to say, I just have to, well, if they're not going to do it, then there's nothing I can do about it. It's up to them. I can lead them. I can tell them what they should be doing, but it's up to them. ... I basically decided that if they, if they choose not to do it, then that that's, you know, that's up to them.

\*emphasis is marked with underlines.

\*similarities are marked in blue.

These two quotes represent one of the most common themes that was discussed by nearly all participants: the control that teachers assumed in a pre-pandemic classroom was non-existent in TDP. No matter how they design the class or their lessons, it was eventually up to the student to engage, complete the work, ask for help, respond to requests, and even learn. Teachers' and peers' involvement had little effect if students decided not to engage or be actively involved. Hence, TDP classes became more student-dependent; that is, it is up to the student to decide how involved they want (or can) be and how invested they are in the learning process.

#### **6.8.2.4 Other community members**

Tensions beyond students' division of labor also existed. Although access to other community members who served different roles in the activity was still available, it was not as easily or quickly accessible as needed. As participants shared the way they ran their remote classes and the kind of issues they had to deal with, they listed many tasks that should have been, in theory, or could have been delegated to or shared with another community members. These tasks are summarized in Table 6.5. It should be noted that while nearly all participants took on these tasks alone at the beginning, after some time, some did manage to delegate to other community members or utilize their help and support. That is, after some of the dust had settled, I think many realized that they were not struggling alone as others started sharing their struggles via the shared WhatsApp group, Zoom meetings, and/or emails. Some utilized the shared experience of struggle as an opportunity to ask for advice and help from colleagues who had already figured their way out (Figure 6.45).

**Figure 6.45** Colleagues' support was crucial and much appreciated

**Female Participant 7 (FP7) – 2020**

Some colleagues have been extremely supportive, patient and generous with their skills and time in helping me to overcome any technical issues I have had. Far more than the institution.

**Female Participant 2 (FP2) – 2020**

I think, yeah, using WhatsApp has been, I think, really useful in general and also Zoom meetings. When was it like last a couple of weeks ago, when we had to create groups for the speaking [exams], some people found that really difficult and, you know, we were able to do the Zoom meetings, one-on-one, to get through that challenge.

\*emphasis is marked with underlines.

**Table 6.5.** New tasks that developed as a response to the new needs of teaching remotely and during a pandemic

Tasks performed by teachers	Possible delegate
create and adapt materials to suit the needs of the new environment	colleagues
troubleshoot tools and connection issues during and for classes	IT support, edtech team
figure out how to best maintain students' interest and engagement during a remote lesson	colleagues, edtech team
identify and address the students' needs for learning during a pandemic	counselors, colleagues

identify and address the learning needs of students with learning difficulties during a pandemic and remotely	counselors
identify ways to maintain the quality of the learning experience and at the same time offer some leniency to ease the perceived stress of learning remotely and/or during a pandemic	colleagues, counselors, management (?)

## 6.9 Rules

### 6.9.1 What are the rules?

One of the aspects that I appreciate about CHAT is that it acknowledges that individuals are bound by sets of predefined rules and socially-determined norms that both enable and restrict an activity. I also appreciate the nod CHAT gives to *implicit* rules, implicit in the sense they are unwritten rules in the environment or in the sense that individuals themselves are not consciously aware of their adherence to them.

### 6.9.2 How have the rules developed?

A lot of what used to be effective in teachers' experience became problematic:

I am thinking more about my students and how my delivery.. how effective it is. What I need to do is think how should I, if I see that half of my class has not submitted an assignment, for example, or finished the activity, how should I respond to that? Should I mark them absent?

Should I send them a... I mean, I don't know because in class it's very different. They're working on it. (FP3)

Participants shared questions about rules and norms of learning, behavior management, language skills, and even student engagement. For example, teachers' criteria of what is an effective learning e-tool changed a lot, as discussed throughout. Their newly-found focus on tracking was brought into the spotlight (Figure 6.46).

**Figure 6.46 Teachers' reliance on trackable learning tasks**

**Female Participant 4 (FP4) – 2020**

I realized that I needed to find materials that were trackable, because if I gave them something to do, and it wasn't trackable, they wouldn't do it. So, I would do things like of course Kahoot quizzes. These are always good because I can see who's online with me. I can see who's working. Blackboard assignments are good as well. I can track to see who has submitted and so on. So I found that to be much more effective than just giving them any tasks to do, because most of them won't do it.

**Female Participant 5 (FP5) – 2020**

I have to do things that are interactive more. I mean, I can't just give them a PDF and tell them, start answering on this PDF, and I can't track it. In classroom, I can see who's working and who's not. Online, I can't see anything. So if I just give them a PDF, how am I gonna know?

\*emphasis is marked with underlines.

\*similarities are marked in blue.

Also, as discussed throughout, rules defining effective groupwork, student engagement, and learning activities were renegotiated. It was interesting, however, how behavior management was nearly the only set of rules that

became less demanding or less problematic. Any teacher knows how crucial behavior management is for the success of a lesson, especially with the presence of disruptive students. As participants shared their experiences with TDP, many shared their relief that disruptive students no longer had a negative effect on students who were keen on learning and completing the assigned tasks (Figure 6.47).

**Figure 6.47 Behavior management in remote classes was smoother**

**Female Participant 7 (FP7) – 2020**

One positive benefit of remote learning is classroom management. Issues with mobile phone distraction are almost non-existent. Also issues with [students] trying to eat in class or going to the bathroom – they may be doing it at home, but I don't have to be as concerned about it as before.

**Male Participant 1 (MP1) – 2020**

There's pros and cons to everything in the classroom. Like I said to you, you know, I get annoyed. Put your phone down. Stop talking, listening, you know, Listen to your teacher for five minute. Every class you say to them, 'All I need is five minutes to just to go over it all. Don't talk.' And they just carry on having a conversation.

\*emphasis is marked with underlines.

\*similarities are marked in blue.

Teachers were no longer worried about managing students' distracting behavior because it no longer affected others. Instead, behavior management focused more on how to maintain students' active participation in class (tracking, shorter activities, etc.).

## 6.10 Actions

### 6.10.1 What are the actions?

The distinction between *actions* and *activities* was made by Leontiev to highlight the collective nature of human activity— “through mediated processes of internalisation and externalisation, activities become actions, objects of previous activities become mediating artefacts, and so on” (Bligh & Flood, 2015, p. 147), reflecting the “restructuring of mental processes as a result of development in a cultural environment” (Kaptelinin & Nardi, 2012, p. 17). The distinction between actions and activities is unique; they are “distinct and yet unified phenomena” (Sannino, 2011, p. 573). “Activity *generates* actions” and defines the meaning of these actions (Bligh & Flood, 2015, p. 147, emphasis in original). These actions are often seen as “immediate practices” (Edwards, 2009, p. 199) distributed through an agreed-upon (sometimes, unwritten) division of labor between members of a community in an activity. But, the “dynamic, developmental relationships between activity, actions, operations, objects and goals” (ibid.) make actions “not fully predictable, rational, and machine-like” because, as CHAT posits, the activity will almost always face “failures, disruptions, and unexpected innovations” (Engeström, 1999, p. 32) that cause some kind of reconfiguration. With this understanding of actions, one can conclude that actions are fundamental in any activity and, although not visually represented in activity system model, should not be overlooked when analyzing an activity.

Analyzing actions is not often emphasized in recent research utilizing activity systems analysis, probably because it is believed that “a focus on action does



not account for the historical continuity and longevity of human life” (Sannino et al., 2009, p. 3). However, the importance of actions in an activity cannot be overlooked. Having built this theory on Vygotsky’s triangle (individual *action*), Leontiev believed that “it is important to understand actions as deriving from the whole process of activity because a meaning of an action is dependent on its role in activity” (Lektorsky, 2009, p. 77).

In the context of education, many community members are involved to perform actions without which the activity of teaching cannot be sustained. The computer-mediated nature of classrooms have, I believe, given importance to non-educational variables that greatly shape the teaching experience. In pre-pandemic times, typical actions that shape the activity of teaching were distributed among teachers (subject) and other community members: students, colleagues, department head, division head, assessment committee, support teams (counselors, edtech team, IT team, facilitates team). These actions were highlighted previously in Table 6.5, in *division of labor*.

### **6.10.2 How have the actions developed?**

This study is concerned with teacher’s (the subject) perspective and how they managed to work alongside other community members to maintain the activity of teaching with as minimal disruption as possible. From their last interviews, as participants discussed their actions, what struck me the most was how all participants were, one way or another, consciously rethinking and reevaluating their approaches to teaching and to addressing their students’ needs and

ability to learn online and during a pandemic. As they reevaluated their practice and approach, they were not armed with prior experience or extensive training on the matter of teaching during a pandemic or even teaching completely online. This struggle was one of the most critical issues in the study. When looking at it through the lens of CHAT, this tension can be understood in light of two CHAT principles: the hierarchical structure of an activity and the intertwined processes of internalization and externalization—“Internalization and externalization can prevail in different phases of the process of activity. But they constantly accompany each other” (Lektorsky, 2009, p. 83).

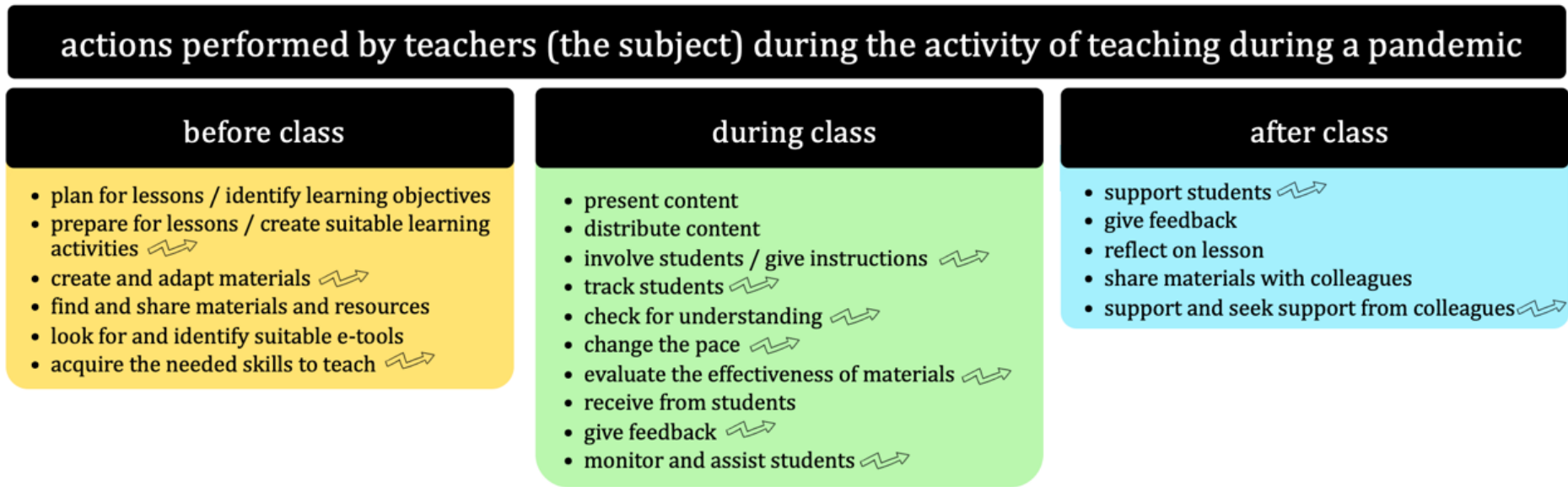
An activity, as established by Leontiev, is “composed by a sequence of steps” (Kaptelinin & Nardi, 2012, p. 26), or actions, which are *consciously* performed to serve their own goals and the overall motive of the activity. As participants shared their practices (2019 and 2020), they highlighted a few actions that they regularly perform as part of the activity of teaching. It was remarkable how these circumstances have driven teachers to rethink their approach to teaching and their understanding of effective feedback, student engagement, and to some extent learning. Instead of just following similar plans or strategies to what they had done in the past (they are the same courses and same kind of students after all), they all found themselves thinking about ways to plan lessons, introduce topics, give effective feedback, keep students engaged, support weaker students, provide stronger students with enough work, and even give instructions. For example:

I've really had to think critically about, like, what tools I'm using and what tasks I want students to, to complete, and like, what tools are the best to complete that task. So yeah, I just had to be more, I guess, more critical about what I'm doing and how I'm doing it. (FP2)

Although it was a demanding task, as FP3 noted, "it's a good thing to think about your students and how things are working, what things are working well, and maybe what's not working well."

Figure 6.48 outlines the actions discussed by participants and marks the ones that were highlighted during the 2020 interviews as disrupted actions, whether resolved easily or not (or at all) is another matter. These actions serve their own purposes, and they all contribute to the main objective or motive of the activity: teaching students English and helping them pass assessments. The assumption held by CHAT is that the more frequently these actions are performed by teachers, the more automatic they become, and the less thought goes into performing them. This allows for actions to become further *internalized* and transformed into *operations*, which are routines that do not require a lot of thought or deliberate attention.

Figure 6.48 Actions performed by the subjects of the activity



a tension was present during the activity of teaching during a pandemic

## 6.11 Concluding remarks

Looking at the development this activity went through, I find this quote from a TEDx talk offers an apt description of it: “when we can no longer change our circumstances, we are challenged to change ourselves” (George, 2018). That is, I find it amazing how these unique pandemic-driven circumstances challenged my participants to change not only their practices, but it also drove them to rethink their understanding of teaching and learning.

As well, as I reread my sources in the process of writing this chapter, I came to the realization that this study reflects a natural (i.e., not research-driven) instance of *expansive learning* where participants and their community have been on a journey to discover and establish a *concrete* understanding of the (very) *abstract* notion of teaching during a pandemic. Although the theory is mainly used in intervention research with the aim of “explaining and guiding collective transformation efforts in organizations, workplaces, and communities” (Engeström, 2016, p. 138), it was such a light bulb moment for me when I read Engeström’s elaboration on expansive learning:








The second factor [that highlights the societal need for expansive learning] is the emergence and increasing presence of global threats and risks, or ‘runaway objects’, exemplified by global warming, *new pandemic diseases*, and global financial disasters. This opens up the field of *tremendous challenges for concept formation and practical redesign* in a scale that has to exceed the boundaries of any single discipline, profession, or organization (p. 40, emphasis added).

After popping the first thought bubble of “did Engeström, as Bill Gates, see this pandemic coming too?”, I was intrigued by the connection he makes to pandemic-induced changes. Engeström (2016) describes expansive learning as “a process of concept formation” (p. 74) in which the end-goal is not known, which can be overwhelming in a context that is becoming increasingly unstable and unpredictable like the one in this study. “Nobody knows exactly what needs to be learned. The design of the new activity and the acquisition of the knowledge and skills it requires are increasingly intertwined. In expansive learning activity, they merge” (Engeström, 2016, p. 39). This was exactly what had been happening. Everyone at the institute, at all levels of the community, were in the process of figuring out ways to understand *and* deal with the new reality imposed by the pandemic as it was unfolding, not knowing which direction they should or will be headed. As with expansive cycles, participants were attempting to make conclusions or decisions based on a). their experiences with older forms of this activity and b). the disruptions they are facing in the current activity. “Those decisions are made locally, within the expansive cycles themselves, under conditions of uncertainty and intensive search. Yet they are not arbitrary decisions” (Engeström, 1999, p. 34). They were rationalized based on each participant’s a). understanding of what teaching and learning generally is, b). perception of the pandemic and its effects, and c). the reaction to pandemic-related norms and rules starting to form in the community and to inform their decisions and individual actions. These reflections, as Lektorsky (2009) suggests, are an essential part of any transformation in activity systems that face tensions. “Reflection as a new

mediation is necessary for changing activity, for generating and constructing something new” (p. 86).

With this revelation, I took another look at the data to identify if I can make the argument for an expansive learning cycle. The cycle, as identified by Engeström (2016), should have taken participants through an “ideal-typical sequence of actions in a cycle” (p. 144) of expansive learning as they attempted to create a modified form of the practice of teaching that fits the new environment. Engeström broke it down to seven steps or, as he calls them, *actions*. Figure 6.49 illustrates these steps; although they form a *cycle*, I chose to display these actions in a linear or a connected manner because, as Engeström (2016) reveals, in practice, cycles of expansive learning could have “odd combinations, breaks, digressions, and iterative loops” that might break the sequence of steps or might cause individuals to go into iterative loops of a few actions.

**Figure 6.49 Expansive learning actions**

Expansive learning actions		
	<b>Questioning</b>	The accepted form of the activity is seen ineffective prompting individuals to question and critique its aspects
	<b>Analyzing</b>	Individuals look deeper into the activity and its history as they attempt to answer “why” questions to better understand it
	<b>Modelling</b>	Individuals propose possible modifications or alternatives to resolve tensions and better serve the context
	<b>Examining</b>	Individuals experiment with the proposed model to examine its usefulness and applicability in the current context
	<b>Implementing</b>	Individuals apply the model and find ways to make it more responsive to the needs of the activity and context
	<b>Reflecting</b>	As with questioning, individuals evaluate the emerging activity and look for possible ways to improve it
	<b>Consolidating &amp; generalizing</b>	Individuals solidify the newly-formed/adapted activity and accept it as the new norm

Adapted from Engeström (2016)

As I looked through the interviews, I found that participants did indeed experience the initial stages of expansive learning, namely: questioning, analyzing and the beginning implementation/reflection. Before I explain, I should remind the reader that data were collected after only a few months of teaching during the pandemic, and at a time where teachers did not have the luxury of modelling and examining their modified practices before they apply them. Given the time of data collection, it makes sense to see how my participants were overwhelmed by their inability to model and examine the needed changes before they implemented them. However, that did not deter them from embracing their *transformative agency*, which is considered “a quality of expansive learning. Learning expansively requires breaking away from the given frame of action and taking initiative to transform it” (Sannino et al., 2018, p. 117). Teachers in this study could not afford to wait for management or the professional body of teaching to inform their decision or dictate how their practices should be modified. They took the lead and, in the process, were adapting old and generating new practices that “carry culture-oriented vision loaded with initiative and commitment by the learners” (ibid.) which are the teachers in this study. In many instances, as teachers explained their decisions, they considered both the present situation and the near future ahead of them although it was (still to an extent) full of unknown variables and unpredictable changes. Although data in the study do not allow for drawing conclusions on how the activity of teaching will eventually be redefined, or what the expansive cycle of learning will produce, I believe these renegotiations that teachers went through will lead to “a *conscious collaborative* activity, beginning when individuals question the accepted



practices and concepts” (Virkkunen, 2009, p. 152, emphasis added). As any social change, it won’t quickly reach its peak or be fully conceptualized soon, but I do believe this abrupt unconventional phase of teaching and learning has dropped the first domino of what I believe is a new era of teaching and learning; but I could be wrong: “Expansive learning is manifested primarily as changes in the object of the collective activity. In successful expansive learning, this eventually leads to a qualitative transformation of all components of the activity system” (Engeström, 2016, p. 49).

## Chapter 7: Discussion

Many businesses suffered, especially hotel, tourism and travel. Phone companies, however, and Internet providers in particular, boasted huge increases in profits as residents were forced to find alternative ways of accessing information and communicating with each other. Priorities were reassessed; communities had to find ways of coping with the panic while contributing to the fight against the disease. ...

Schools were closed suddenly. Teachers had to re-think their teaching strategies and provide their students with new and different opportunities to work through curriculum requirements. Some teachers simply recorded teaching monologues and uploaded them online.

Other more innovative teachers set WebQuest activities, but most were unprepared. (Fox, 2003, p. 319)

What I find most surprising about this quote is that it was in fact written in 2003, after SARS hit China. It is true that the effect of SARS did not impede life as globally as Covid-19 has, but reading Fox's account now and seeing how our current lives are merely an elaborate replica of it, I cannot but wonder: how did we end up as unprepared as we were in facing the pandemic? How could we have reached to a stage where researchers can safely claim "never has American education experienced such widespread constraints" (DeMatthews et al., 2020, p. 398)?

As I wonder, one of my favorite quotes by Cole (1981) comes to mind: "it is one thing to criticize and to moan about crises; it is another to resolve them"

(p. ix). Put differently, unless we attempt to learn from the challenges we had to endure because of this pandemic, we run the risk of dismissing the ultimate goal of doing research: better our understanding of the world in ways that can improve our lives and make us better people and better at what we do. It is imperative, therefore, that we make the needed changes now to make sure future generations do not face the same (repeated!) reality we ended up with today. To do so, I find Selwyn's questions about the impact of the pandemic to be a useful way to approach this attempt, "amid this turmoil it is always most interesting to ask two questions: 'What is new here?' and 'How might things be otherwise?'" (Selwyn & Jandrić, 2020, p. 1003)

To answer *what is new here*, I will discuss the answers to the study's research questions, namely:

1.1. What kind of *issues* have teachers faced as they engaged in TDP?

1.2. What kind of *strategies* have teachers utilized to respond to Covid-driven changes and challenges?

I will then address Selwyn's second question by sharing some implications and recommendations for next steps based on what I have learned from the data and the literature.

### **7.1 Research Question 1.1 What kind of issues have teachers faced as they engaged in TDP?**

The kind of issues that were highlighted by participants as they practice TDP for the first time can be grouped into three closely connected groups. These

groups are based on how teachers felt about and discussed these issues: some issues were appreciated, some needed to be redefined, and some were a cause of concern. But, before discussing these issues, it could be helpful to summarize the tensions that the teachers experienced in the process of TDP.

Tensions, or contradictions, are an essential part of ongoing activities. The number and intensity of these tensions vary from one activity to another, leading to different degrees and kinds of change and development. As highlighted in this study, the pandemic—especially in its early days—was the breeding ground for many tensions as the subjects and the community were trying to figure out the best way to staying safe *and* maintaining the activity of teaching as intact as possible. These tensions can be summarized into three layers: the dawn of a new era, redefining the game, and upgrading the players (see Figure 7.1). While each one was built on the other, all three layers kept changing throughout the activity causing instability for all elements and forcing the other layers to change as well.

**Figure 7.1 The main tensions highlighted in this study**



The foundation of all tensions observed in this study was initiated by the drastic changes in the *environment*, the main player in *the dawn of a new era*. With the introduction of the pandemic in a sudden a drastic manner, all human activities were required to couple their existing objects with a new *object*: staying safe. This new object forced the *community* in the activity of TDP to introduce new *rules* and redefine existing ones, limit/change so many *artifacts* (psychological and physical), redefine the *division of labor* on different levels, and even forced the *subjects* to reconsider the *actions* they took to satisfy the

never-changing main *object* of the activity: helping students pass the course. Interestingly, this change in the environment also led to redefining the *environment* itself as it enforced the need to be physically distant and eliminated the ability to utilize classrooms in their traditional (i.e., pre-pandemic) sense.

Having to deal with a completely different form of teaching, the *subjects* were the main player in the second layer of tensions: *redefining the game*. They were left renegotiating the essence of teaching and learning, as they dealt with the emotional and social toll of the pandemic outside the class as well. This meant that they needed to reconsider and reflect on many *actions* and *rules* that defined the process of teaching *and* learning. They also found themselves renegotiating the *artifacts* needed and used for the activity: they eliminated, created, and redefined many psychological and physical artifacts. With what felt like a restricting remote environment, the subjects also struggled with restricted access to different layers of the *community*. Restricted access to the *community*—as compared to pre-pandemic times—led to tension in how the *division of labor* is defined and utilized to sustain the main object of the activity without overloading the subjects with the evolving needs of the activity.

Finally, with *the new era* shaking the foundation of the activity and causing the subjects along with the community to *redefine the game*, the players were forced to step up to survive; nearly all the elements defining the activity were affected. This final layer of tensions, *upgrading the players*, was formed in response to the tensions caused in both layers: the dawn of a new era *and*

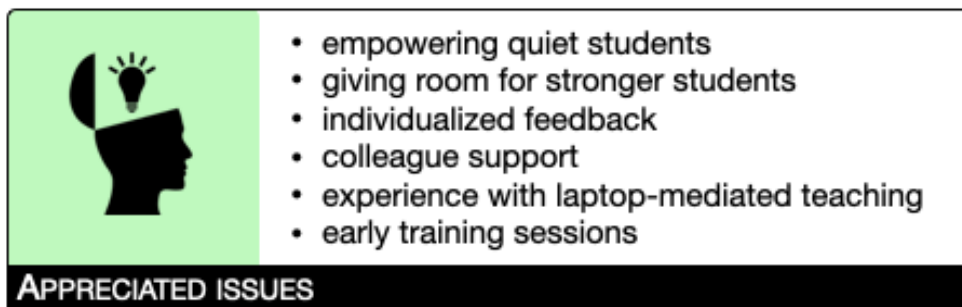
redefining the game. This included the *artifacts*, *rules*, and *division of labor*.

They all went through a rigorous process of redefinition and rehabilitation to fulfill the growing and sometimes unclear needs of the activity of TDP *and* the need to stay safe in this new environment.

### 7.1.1 Issues that were appreciated

This new experience allowed teachers and learners to experience the lesson from a different perspective (see Figure 7.2).

**Figure 7.2 Issues that were appreciated**



#### 7.1.1.1 Empowering students

Starting with the unexpected positive side of TDP, many teachers appreciated how the remote environment allowed some students to shine, or put differently, teachers appreciated how some students utilized the opportunity to their advantage, namely quiet students and more proficient students. Students who were normally quiet or reserved in the classroom, unexpectedly, became more vocal (in written forms) and were more actively involved during class.

This active involvement was seen in forms of participation via chat during the lesson and emails sent to the teacher out of class. Stronger students were no

longer held back by the slower pace of teacher-controlled classrooms. This is because many teachers reorganized their lessons in ways where students became more in control of their learning, enabling stronger ones to complete more tasks than they would normally have in a pre-pandemic classroom. As well, with the absence of disruptive students, the lesson was no longer interrupted by the need to manage these students or by the distraction they normally introduced into the class.

Unsurprisingly, results from different studies show students on both sides of the fence when it comes to viewing the quality of learning or engagement. Some studies report learners finding the experience of learning during a pandemic lacking (Abuhammad, 2020; Dost et al., 2020); “Overall, students did not find online teaching to be engaging or enjoyable, with limited opportunities to ask questions” (Dost et al., 2020, p. 4). Others report students expressing how empowering they found the remote experience to be; “I would be nervous and afraid when I asked questions of the professor during offline classes, but now I feel more comfortable because I can turn off my camera and ask questions more easily” (Shim & Lee, 2020, p. 4). Some studies conclude *both* views from their sample (Day et al., 2020; Niemi & Kousa, 2020). There do not seem to be unique elements shaping these contexts to predict how students find the experience, and results from this study reflect the same variance. Almost all teachers noted how TDP has led to different effects on students: some were empowered, some struggled, and some vanished into a ghost user that barely signs into class. However, with data from teachers’ perspective only, I cannot, with certainty, explain the variance.



But, I believe these inconclusive ways of perceiving the experience of learning during the pandemic (LDP) allow for one to argue that these mixed findings reflect how a one-size-fits-all solution to teaching and learning during a pandemic will probably not work.

#### **7.1.1.2 Individualized feedback**

Another appreciated aspect of TDP was the transformation it led in terms of giving feedback for some teachers. Teachers were no longer able to give instant feedback to individual students, so some opted for meeting with students one-on-one to provide individual feedback. The difference that turned this form of feedback into a more effective one, for some participants, is its privacy. In pre-pandemic classes, teachers normally gave feedback to students in class, with others present. No matter how discrete they tried to be, others were bound to hear some of it. Giving this kind of feedback online allowed teachers to meet privately with students, away from others. Teachers who noted this as a positive change believed this eliminated any possible embarrassment for the student, and it also allowed the teacher to better connect with the student. Karaoglan Yilmaz and Yilmaz (2020) observe a similar positive effect in their non-TDP study. They studied the effect of providing students individualized feedback based on learning analytics as a form of increasing metacognitive awareness of their own learning. They conclude that providing students with individual feedback based on their own performance is “effective in increasing motivation as it individualises teaching and provides support and guidance to the student in the learning environment” (p. 9).

### **7.1.1.3 Colleagues' support**

Although not as optimal as it would have been on campus, participants appreciated their colleagues' support throughout the process of TDP. It was highly appreciated by most participants, as did K-12 teachers in Trust and Whalen (2020). This support took on many forms: sharing tips and materials, answering questions and fixing problems, and venting and catching up. While these forms of support were more readily available and more easily accessible on campus, participants did find solace in the fact that they can depend on their colleagues when they struggle with a tool or are not sure about the latest changes. Some felt overwhelmed by the newly adopted forms of support (such as WhatsApp group), but as indicated by many, the benefits of having this group outweighed the overwhelm it might have caused.

### **7.1.1.4 Prior experience with laptop-mediated classrooms**

Almost all participants found their prior experience of teaching computer-mediated classrooms made the transition to abrupt remote teaching possible. Their familiarity with tools to create e-materials (all which can be delivered completely online) made it possible for them to recreate or revamp many of their teacher-dependent materials; they also allowed for creating content that students can complete on their own without any need for their teacher's supervision or involvement. Although the remote nature of TDP has demanded that they learn a new set of skills (e.g., delivering lessons online and communicating with students online), these skills were not completely foreign to teachers and were easily acquired using trial and error, colleague

support, and PD sessions. Their experience with laptop-mediated instruction also meant that they had a bank of materials that can be used remotely. The only difference is the structure of these materials needed to depend less on the teacher's presence and more on the student's ability and motivation to complete the task. Teachers in Scull et al. (2020) identified a similar need to revamp materials to suit the different needs imposed by remote learning; one example mirrored my participants' choices: breaking down materials and activities into "*smaller, discrete online activities* designed to allow students to access different forms of learning in meaningful way" (p. 4, emphasis in original).

#### **7.1.1.5 Timely professional development**

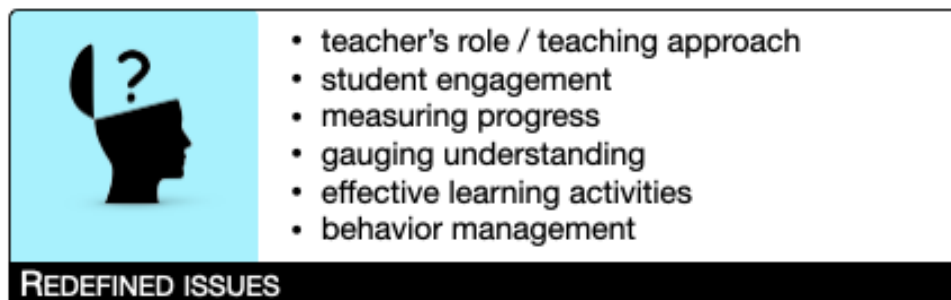
Finally, some participants appreciated the support offered by the edtech team at the institute. The speed at which they managed to prepare and deliver PDs that address the basic skills needed to run a remote lesson using Collaborate was appreciated and much needed. Participants in the study, echoing findings from Trust and Whalen (2020), did highlight the need for further training on non-tech related issues. The institution has already started responding to these needs by offering workshops on how to engage students in remote groupwork, how to create engaging remote lessons and others.

#### **7.1.2 Issues that were redefined**

This category of issues is the most interesting in terms of transformation (see Figure 7.3). Participants' discussion of these issues showed a lot of reflection and, many times, conflict. Without any formal training or guiding theories on

how to teach remotely (in this culture) and/or during a pandemic, teachers were unable to apply the same pre-pandemic teaching strategies and understanding to the new environment. Many aspects were found incompatible and needed to be renegotiated.

**Figure 7.3 Issues that were redefined**



### **7.1.2.1 Teacher's role and teaching approach**

One of the most troubling redefinitions was how teachers defined their role in class. The new environment restricted their ability to practice many roles they normally believed were essential. These roles include monitoring students' progress, providing assistance to struggling students, motivating inactive students, and modifying the lesson plan on the go to respond to the needs of students and the lesson. These roles were disrupted because the students and the teacher no longer shared the same space, and because teachers' access to students was greatly restricted, and in many cases non-existent. As well, Vollbrecht et al. (2020) note that the technologies utilized in TDP also add several non-teaching roles, such as troubleshooting tool problems and monitoring the chat. They suggest that a teacher is always supported by at least one staff member to assist with non-teaching roles. This redefinition

process has also portrayed a qualitative transformation towards a different understanding of how teachers can serve their traditional roles. As noted by Vollbrecht et al. (2020) the experience of TDP has “allowed us to take a step back and carefully examine our own course” (p.725). Because of the demands of TDP, participants found themselves utilize other means for giving feedback, as noted in the results section, and they gained a different understanding of how a teacher can be more attuned to their students’ wellbeing and of how it might affect their learning abilities.

#### **7.1.2.2 Engagement, progress and understanding**

Engaging students and motivating them, measuring students’ progress, and checking for understanding were among the commonly redefined issue. For many participants, these issues were a battlefield. As they discussed what felt absent in remote classes, most participants indicated the need for the long-gone give and take between a teacher and their students that used to make their classes feel alive, and the need to be able to see students. The inability to engage students in a live manner or to interact with them, led many participants to feel *alone* in remote class, *talking to themselves*. What used to be considered simple ways to engage students turned into time-demanding ones that might not even be possible: eliciting answers from students, opening the door for questions, monitoring students’ active involvement, and for many, assigning groupwork. These aspects can be seen as the *social* part of class, a part that cannot be easily replicated online, especially with the absence of video and audio from the students. Usurpingly, different studies that surveyed teachers have reported similar struggles with engagement

(Aliyyah et al., 2020; Bhagat & Kim, 2020; Hamilton et al., 2020; Niemi & Kousa, 2020; Vollbrecht et al., 2020), measuring student progress and checking for understanding (Aliyyah et al., 2020). A teacher in Niemi and Kousa (2020) share a similar experience to that reported by some participants:

They're like ghosts in the classroom: they don't follow instruction, listen to instructional videos, or do assignments. I guess the same situation would occur in in-person teaching, but then it would even be necessary to be physically in class all the time and thereby be exposed to interaction with the teacher. (p. 361)

Aliyyah et al. (2020) also report that such struggles have led some teachers “to a decline in the enthusiasm to teach” (p. 102). One way to explain this stark difference is offered by Themelis and Sime (2020). As they reflect on the difference between face-to-face and “video-mediated contexts”, they examine “the assumption that when online participants are not co-located, they are in an imperfect state, and expect technology to reconstruct a perfect state” (p. 265). They explain that face-to-face classes offer a *stage* that facilitates social interactions and the enable individuals to perform and present themselves; a stage that is “collaboratively construct[ed]”. This is why they emphasize the need for teachers who utilize “video-mediated settings” to pay attention to “the construction of a shared social context that gives a ‘sense of place’ to participants” (p. 265). They also stress the importance of the context in determining the success of synchronous online learning. I find their discussion illuminating because it could explain how the lack of students’ video (and

audio) presence has contributed to teachers feeling that the dynamics of the classroom have completely vanished; many reiterated the feeling of losing control, of being alone, of not being able to help. A participant said, “the prestige of being a teacher is not there in remote learning. I mean, we’re not humans. We’ve turned into machines [that gives assignments].”

### **7.1.2.3 Effective learning activities**

Another question that was raised during TDP was what counts as an *effective* learning activity. In their 2019 interviews, many teachers indicated that their ability to interact with students and see them in action were important indicators of what works and what doesn’t in class, with a specific group of students (i.e., it is different from one class to another). With access to students being limited to text or nothing, teachers can no longer depend on students’ active involvement in class, their excitement, or their ability to “walk around and check” to measure how effective the content they have is with these students. Vollbrecht et al. (2020) share this view, “the combination of not having visual cues and the awkwardness of interjecting with questions made communication particularly difficult” (p. 724). As well, the drastic change in the learning environment, or *learning space* can explain the need teachers felt to reconsider the effectiveness of their established teaching approach. Reflecting on the result of this study, the assertion of Pearshouse et al. (2009) perfectly explains the struggle that teachers experienced, “new spaces and technologies disrupt the old modes of teaching and learning as they are often based on a shift from a transmission model to a deliberately flexible, student-centred approach” (p. 5).

The affordances (not) offered by the technologies that support TDP also required that a lot of changes are made. For example, Vollbrecht et al. (2020) recognize the need for allotting more time to “transitions between the small groups and the whole class” (p. 724) activities because of the nature of these tools; the same concept applies to other affordances, sharing a screen, students joining an activity on another link, etc. With all of these factors in play, many changes were made to their approach to teaching, but many participants expressed their uncertainty about whether or not their adaptations were congruent with effective remote learning strategies or remote teaching practices. They were not sure how to best accommodate a teaching environment that was done remotely (i.e., no teacher or peers to help and no direct access to students) and/or done during a pandemic (i.e., at home and with the associated fear of the pandemic). Recent publications share similar uncertain views of what is most effective in an environment as unique as the one we are experiencing now (Kraft et al., 2020; Sali, 2020; W Zhang et al., 2020).

#### **7.1.2.4 Behavior management**

Finally, behavior management in its traditional sense has been redefined. Some teachers found that remote teaching has eliminated the distraction that would have been caused by disruptive students or students who are not motivated. They reflected that such issues would have disrupted the flow of the lesson or could have affected the atmosphere in class. That said, while this aspect of classroom management was eliminated, other aspects of classroom management emerged. In the new environment, teachers are now



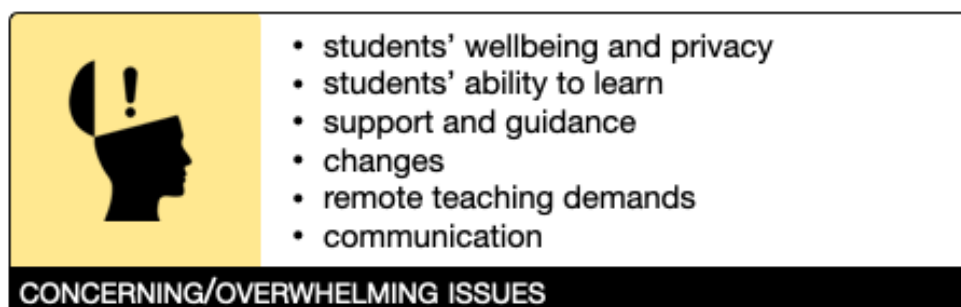
expected to manage other issues, such as: managing and responding to chat messages, keeping track of students' availability (especially those that are signed in but not active), troubleshooting tech and connectivity problems for students during class, and navigating tools/screens simultaneously.

One could argue that teachers always troubleshooted tech and connectivity problems in their laptop-mediated classes. This is true, but remote lessons are highly dependent on connectivity and certain features (audio working, screen sharing is visible, etc). Without these features, the lesson cannot exist. In the past, when the technology presented an issue beyond the teacher's scope of expertise, they always had the option to resolve to other non-tech means; they could revamp the activity, they could ask students to share devices that work, and they could drop the activity and move to one where students could interact face-to-face without any need for technology. These solutions are not feasible in a remote lesson if the technology does not work.

### **7.1.3 Issues that caused concern and overwhelm**

I struggled with naming this category. It concerns areas that teachers seemed to *still* be negotiating or trying to figure out, whether in terms of how these issues fit in their role as a teacher, or in terms of how these issues can be handled well along with everything else. See Figure 7.4.

**Figure 7.4 Issues that were a cause of concern**



### **7.1.3.1 Students' wellbeing and privacy**

The first is about students' emotional and mental wellbeing and how it seemed to affect teachers' decisions to a great extent. Schwartzman (2020) reports similar concerns with teachers facing the need to "to calibrate the balance between rigor and accommodation" (p. 505). It is true that teachers normally care about and take into account their students' wellbeing, but the pandemic and the worry it has caused foregrounded teachers' concern and attention to students' wellbeing. Many participants in the present study reflected on how they find themselves more attuned to students' emotional state; this led some to be more lenient and some lowered their expectations of how much students can get done or how fast they can complete the assigned work, a conclusion reached by teachers in Schwartzman's study as well. A concern for students' privacy was also evident. This concern stems from an awareness that students shared their spaces with their family members; they do not necessarily have their own dedicated space. In a culture that values privacy (especially that of females), the study found that teachers were more understanding of students' reluctance to turn on their videos and microphones during class time. This explained, for many participants, students' reluctance

to turn on their microphones or videos. A participant explained “the fact that students are not putting or not switching on their videos, I think this is one of the cultural rules. They don't want other students to see them. They want their privacy.” Being a strong believer in the importance of digital privacy, I find it strange that the issue of privacy did not dominate the literature as strongly as I had expected. Some studies (e.g., Hamilton et al., 2020) did allude to the privacy of students and their households being a concern, but no discussions were provided as to how these concerns were addressed or should be handled for future reference.

#### **7.1.3.2 Students’ ability to learn**

Another important area of concern was students’ ability to learn remotely and during a pandemic. This concern was due to many factors reported by the teachers in the study, many of which were also reported in the literature (Abuhammad, 2020; Adedoyin & Soykan, 2020; Aliyyah et al., 2020; Arнове, 2020; Espinosa Castro, 2020; Schwartzman, 2020; W Zhang et al., 2020). Participants’ concern about students’ ability to learn was explained by a). absence of peers, b). lack of skills to self-motivate and self-direct their own learning, c). presence of special needs, and d). the introduction of an uncontrolled environment.

Lack of *knowledgeable others* (peers or teachers) in the environment has been highlighted in relation to the special needs of students. Espinosa Castro (2020) holds that learning remotely during a pandemic has demanded a set of skills that, in most cases, neither students nor their parents had. They

emphasize this demand has added a lot of burden on students with special needs: “since parents (and the schools) did not have the proper training to move support and assistance on-line, children with special needs fell further behind and already existing segregation increased” (p. 5). Knowing this, I find it remarkable that there were attempts to address some special needs in Osman (2020) in Oman, a neighboring country. They offer the example of guidelines that required instructors, early on, to ensure their adaptations for the TDP were accessible for students with visual impairment. Their guidelines included: providing textual description for graphics, “when using videos that present text on the screen, try to overlay captioning or speech”, and “read aloud if you need to present written text in a recorded lecture” (p. 4).

Students who are in these courses are first-year students who are mostly fresh high school graduates; almost all participants noted how no prior undergraduate experience or skills limited students’ ability to manage learning remotely alone (without direct teacher’s guidance/involvement and immediate support). When describing these missing skills, participants highlighted several areas: a). inability to self-direct their own learning (which they believed is highly needed with the absence of a teacher in their learning environment), b). lack of motivation, c). lack of remote social learning skills that enable effective groupwork, and d). weak communication skills (e.g., during class, to ask for help when needed, and emails). Erfurth and Ridge’s (2020) survey of students mirrors teachers’ observations in this study. Students in their study shared concerns about what I would categorize as falling under a). self-directed learning and d).communication skills; their findings show students

concerned about their inability to manage their time, organize their learning tasks, and to get the help they need in a timely manner. Undergraduate students in Shin and Hickey (2020) acknowledged similar difficulties in self-directed learning and communication skills. Scull et al. (2020) assert the need for c) remote social learning skills; “Data from our study reveal the issue of technical skills is secondary compared to the need for complex cognitive and social skills that underpin success in online-learning environments” (p. 4)

Concerns about the new learning environment were highlighted by all. The role played by the environment, or *learning space*, in the process of learning is highlighted by Bligh and Crook (2017). Asserting that “space has an ‘impact’ on learning, however that impact might be conceived” (p. 71), they discuss varying views of how learning spaces can impact learning in ways that are “increasingly interpenetrated and dependent, as well as constantly developing” (p. 72). They conclude that among the multi-dimensional views adopted by researchers is one that concerns how space can support or restrict social aspects of learning. The remote environment, as found in this study and supported by the literature, somewhat failed to foster a healthy *collaborative* learning environment (Day et al., 2020; Espinosa Castro, 2020; Niemi & Kousa, 2020; Shim & Lee, 2020). As well, Bligh and Crook highlight the *impeding* role of certain aspects of learning spaces. They conclude that learning spaces should account for *basic needs* “for sufficient space, followed by an equitable internal environment, a suitable data communications infrastructure, flexible configuration, and a positive ambience” (p. 73). These needs were exactly the ones highlighted by this study and the literature as

concerns about the sufficiency of the remote learning environment to support learning, as learners lacked a). equal support (not everyone had knowledgeable others), b). reliable internet connection and suitable devices, and c). a dedicated space that facilitates focus and *positive ambience*. (Zhang et al.2020), among others, support this impeding impact of remote instruction (Adedoyin & Soykan, 2020; Aliyyah et al., 2020; Dost et al., 2020; Erfurth & Ridge, 2020; Espinosa Castro, 2020; Niemi & Kousa, 2020; W Zhang et al., 2020). Zhang and colleagues list three reasons to explain how a student or teacher's home environment might have affected their remote learning or teaching: more distractions, lack of access to dedicated learning spaces, and "insufficient hardware and an unstable network at home" (p. 4).

#### **7.1.3.2.1 Class experts are not remote experts**

It can be safely concluded that this issue has highlighted the stark difference in the skills needed to learn efficiently *in a remote environment* versus those needed to learn *in a classroom*. I think this difference is significant enough to be acknowledged using unique terminology, with the hope that this terminology could spark a serious interest in addressing this variation. Based on my findings, I think it would be suitable to build this classification on a beginner/expert continuum. I use this continuum to refer to the *unique skills* that are needed for each delivery mode, and the *degree to which learners have mastered* (or are accustomed to) these modes. I define *class experts* as students who have been familiar with learning *in a classroom* and have, to a degree, mastered these skills enough to learn effectively; similarly, *remote experts* are students who have been immersed in a remote environment long

enough or early on in their learning journey that they have acquired the needed skills for learning remotely in an effective manner. While one might belong to both classifications (i.e., can effectively function in both class and remote environments), a learner who is abruptly immersed into a remote environment, without acquiring the needed skills first, can be classified as a *remote beginner*. A remote beginner has a huge gap in the type and mastery of skills needed for them to effectively learn in the remote environment. Similarly, *class beginners*, do not know and/or do not master the needed skills to learn effectively *in a classroom*. Looking at the current situation we're in, I would say that students in my study can be classified as class experts and remote beginners. Students who started their school journey in this environment, like my niece in first grade, started this year as both class beginners and remote beginners. Next year, if they do transfer to a classroom, they will be class beginners and remote experts.

Before discussing the skills needed for each type of learner, three important points should be noted about this typology. Firstly, this way of classifying learners is limited to their skills and learning strategies. This typology does not suggest in any way that learners from a certain type are better than the other. It just highlights the fact that the skills and strategies for the different environments are different, and that learners are not necessarily equally prepared or ready for these environments. Second of all, I think it is important to clarify the difference between *experts* and *beginners*. I do not see these terms from an either/or perspective, rather I believe they are at the opposite ends of a *scale* that accounts for both dimensions of the typology. I believe

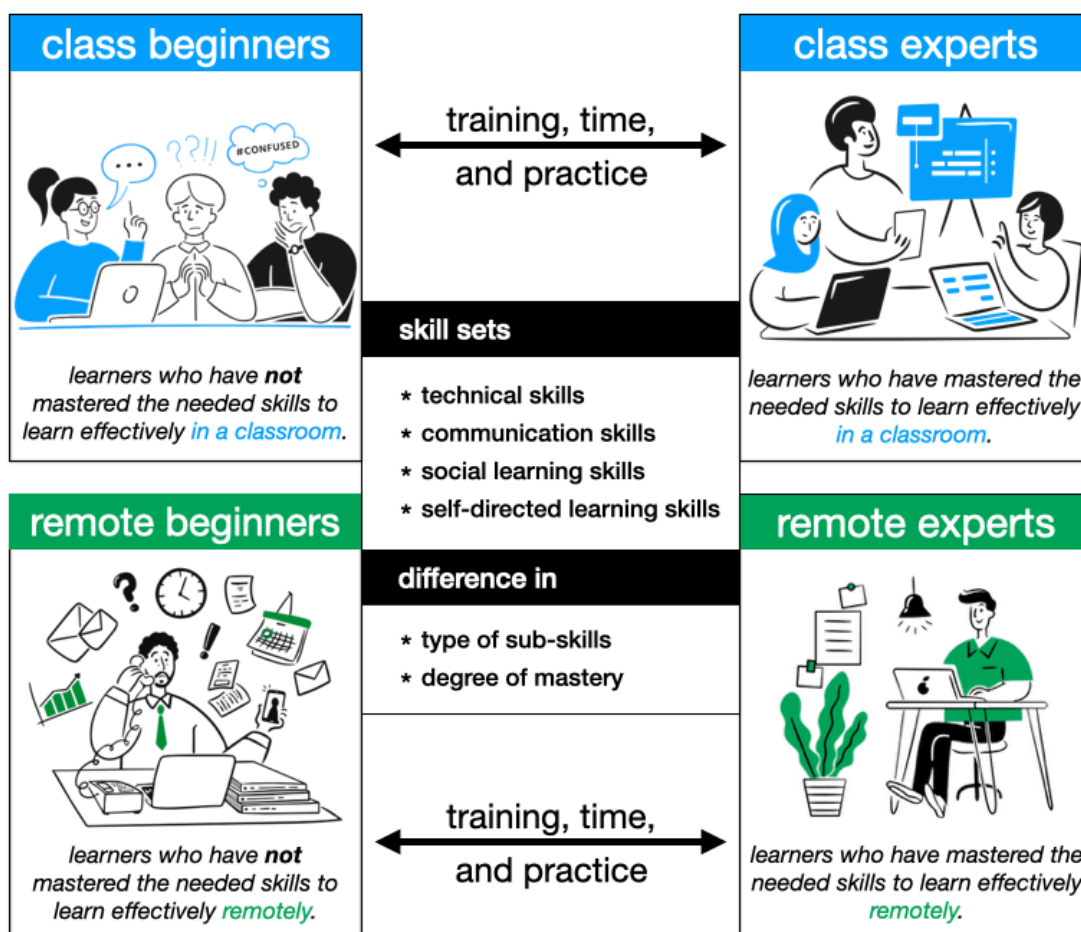
using a *scale* to measure the difference between experts and beginners makes sense because the terms are mainly concerned with *skills* and *strategies*, both which can be mastered/forgotten at different levels and speeds. One last important point that I would like to highlight is related to how permanent and distinct these types are. The difference between experts and beginners is one that can be mitigated by offering suitable training programs and giving students enough time to master the needed skills. This means one can start as a remote beginner but eventually become a remote expert, and one can be both a class and remote expert at the same time.

I am basing this typology on the argument that classroom learning is different from remote learning in certain ways. Looking at data from the study, teachers have reported that their students were primarily class experts and remote beginners. That is, their students were able to learn effectively in a classroom and have demonstrated a reasonable degree of mastery of the needed skills to learn in a class; however, having been abruptly transferred to a remote environment, their classroom skills were not enough to allow for an equally effective learning experience remotely. Teachers believed that students needed to be formally trained and informed on the differences between both types of learning environments and the kinds of learning they support best. As they discussed what felt lacking, four types of skills seemed to emerge: a). technical skills, b). communication skills, c). social learning skills, and d). self-directed learning skills. While all four categories of skills are needed *in both* classroom and remote environments, the *type* of sub-skills and the degree of



mastery needed for an effective learning experience is unique to each environment (see Figure 7.5).

**Figure 7.5 Class and remote experts and beginners**



To further clarify how I see these differences, I will discuss two examples. Looking the last set of skills—self-directed learning skills, remote learning environments, as concluded from this study, require that students have a high degree of mastery when it comes to self-directed learning skills. While this skill set is appreciated in a classroom environment, in a classroom, a student who is not good at self-directed learning can utilize the presence of the teacher and peers to cover the gap. However, results from this study suggest that in a remote environment, if a student lacks these skills, they will find it

difficult to stay on task, to identify when to ask for help, or to stay motivated and driven to learn without being seen or monitored. Another example can be seen in social learning skills. Both environments require social skills for learning to be effective; however, the kind of social skills needed for each environment is different due to the different social environments that can be created within these environments. For example, in a remote environment where access to video and/or audio is not always a given, a learner may not be able to utilize nonverbal cues to assist them in the process of socializing with others. As well, in remote environments, unlike classrooms, a learner has the option to depend on text-only means of communication. This is not possible in a classroom.

#### **7.1.3.3 Teacher's support and guidance**

Results from the study also conclude teachers' concern about their inability to provide guidance and support remotely, as much/fast as they would have hoped or as they would have done in pre-pandemic classes. This worry comes from their inability to see or monitor students during class, and from their experience of students not asking for help when needed. Teachers also experience the need to respond to non-lesson related issues or challenges during a lesson which was either more than they can handle or happened too frequently to be considered nondisruptive. This is partly why Vollbrecht et al. (2020) suggest that support staff join remote lessons, especially ones that employ groupwork. Many teachers in the study also needed to hold Zoom meetings throughout the day to support students; they took more time than they would in-person. Some teachers also found themselves taking on a

counseling role as students approached them with non-lesson struggles that affected their learning, such as Covid-19 related struggles. Teachers in Scull et al. (2020) identified similar issues as they reported their efforts to increase engagement by encouraging students to “*develop help-seeking behaviours* and to model effective online study habits” (p. 5, emphasis added).

#### **7.1.3.4 Constant and abrupt changes**

Other non-student related worries were due to sudden and/or abnormally frequent changes that kept happening, an issue highlighted by many studies discussing TDP (Adedoyin & Soykan, 2020; Bergdahl & Nouri, 2020; Cheema, 2020; Day et al., 2020; Espinosa Castro, 2020; Kraft et al., 2020; Niemi & Kousa, 2020; Tejedor et al., 2020; Trust & Whalen, 2020). In fact, although Watermeyer et al. (2020) believe these changes are not unique, they succinctly describe the pandemic as “undeniably a story of abrupt and violent change” (p. 16). These changes happened more frequently than usual because understanding of Covid-19 and its effects was developing at varying speeds and in different directions (origins, symptoms, effects, most vulnerable audiences, etc.), and so were the measures needed to combat the virus. As well, the remote experience was new to the institution, and as their understanding of its contextualized needs and requirements developed so did their policies and assessment requirements/dates.

#### **7.1.3.5 Remote teaching demands**

Teachers were also inundated with the demands of remote teaching as other studies confirm (Aliyyah et al., 2020; Erfurth & Ridge, 2020; Trust & Whalen,

2020; Watermeyer et al., 2020). “Completely overhauling content delivery is never an easy task, and adding new technology to the mix further complicates the situation” (Vollbrecht et al., 2020, p. 725). The uncertainty and worry resulting from the pandemic and the abrupt nature of the transition made it very difficult for teachers to adapt as quickly as needed. The preparation needed to transform their in-class lesson plans, materials, and learning activities was not an easy task, and the amount of tracking and follow-up that was needed to ensure that students were in fact completing the assigned work was also overwhelming.

Bergdahl and Nouri (2020) similarly report teachers in their study found the remote environment to be “a learning landscape in which social interactions and conditions for learning are not the same as in the traditional classroom; placing new demands on the role of teachers” (p. 12). This is echoed by Vollbrecht et al. (2020) who conclude that running an online session involved many roles that need to be shared by more than one teacher: “facilitating the event, running the PowerPoint presentation, creating polls, handling student technical problems, and monitoring the meeting chat” (p. 723). Erfurth and Ridge (2020) share similar findings; they attribute the added stress teachers felt was due to time needed for preparing lessons *and* interacting with learners, lack of breaks throughout the day, and the added tasks that are created due to the need to work from home. These were similar concerns raised by teachers in this study.

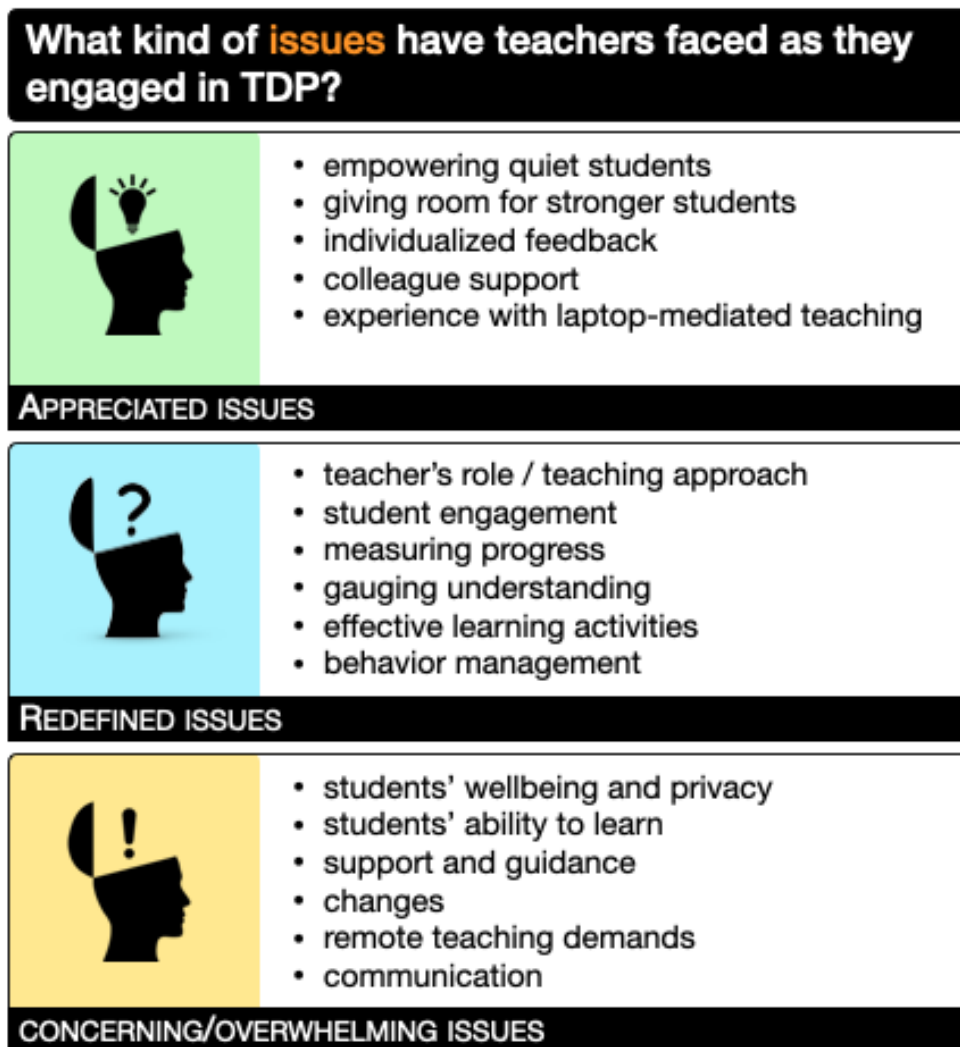
### 7.1.3.6 Communication

Finally, nearly all participants found themselves spending hours responding to emails and other forms of communication (e.g., Zoom meetings requested by others, WhatsApp messages). It seems that students relied on emails to fill the void of not being able to meet others face-to-face. As explained by a teacher, instead of resolving an issue in class with all students, teachers found themselves handling the same issue with each student by email. There also didn't seem to be a set time window for this kind of communication, or for students' expectation of a timely response.

Erfurth and Ridge (2020) reports a similar concern; teachers found that unlike on-campus teaching, there were no longer "set times for student interactions" (p. 8). In a survey of higher education academics in the UK, Watermeyer et al. (2020) offer a similar observation. Their participants, especially those with "home care responsibilities and child dependents" reported feelings of "invasiveness of, and exhaustion suffered from an expectation (primarily from their institutions) of being digitally, and therefore around-the-clock accessible to students and the impact thereof in terms both of their personal wellbeing and professional development" (p. 11). Similar feelings of overwhelm were reported by other studies too (Day et al., 2020; Erfurth & Ridge, 2020; Trust & Whalen, 2020; Watermeyer et al., 2020).

A summary of these issues is presented in Figure 7.6.

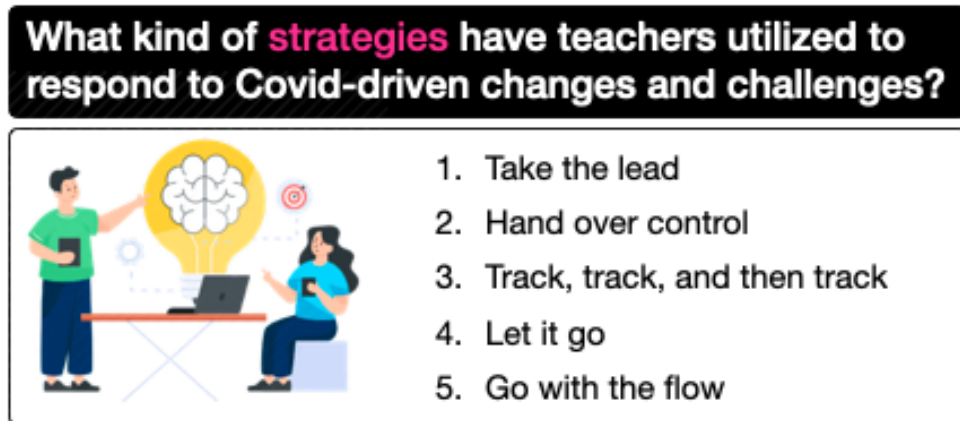
Figure 7.6 A summary of the issues found in the study



## 7.2 Research Question 1.2 What kind of strategies have teachers utilized to respond to Covid-driven changes and challenges?

At the time data were collected for the study, teachers were in their very early stages of TDP, but they did utilize certain strategies to keep the activity sustainable (Figure 7.7). Their strategies to cope with the changes had not been fully crystalized, but they were in the process of being negotiated. These negotiations highlight the tensions that teachers encountered during the process of TDP.

**Figure 7.7 Strategies utilized by participants to sustain the activity of TDP**



### **7.2.1 Take the lead**

Looking at how they have responded, it seems that these tensions have encouraged teachers to take the lead and embrace their transformative agency. As noted by Karakaya (2020), TDP has been characterized by the “pivotal need for instructors’ increased agency in course design” (p. 2).

Teachers in this study always had the agency to use their professional judgement to run their classes as long as it falls within the accepted norm and serves the collective object of increasing pass rates. Nonetheless, remote teaching was a new territory that was not defined by any policies (at the institute) or effective practices (defined by the profession). TDP demanded that changes were made instantly. With the urgent need to take immediate action, teachers utilized a). their prior experience with teaching, b). their knowledge of their students’ learning habits and abilities, c). the support of their colleagues, and d). their understanding of Covid-19 development in their context to make the necessary changes to their teaching approach and their lesson plans.

### 7.2.2 Hand over control

In response to the remote nature of TDP, many teachers felt that their approach to teaching had to be redefined, and they had to develop strategies to reflect this reconceptualization. They noted that their classes became less teacher-dependent and more student-controlled. By student-controlled I mean teachers no longer had the same level of control over what students do, when students interact, or how students complete tasks (if they do). Control was handed over to students, and most teachers believed that first-year students/fresh high school graduates were not ready to handle this kind of responsibility for their learning at this early stage. But, they had no choice in the matter. To make this change possible, teachers had to transform their learning materials and the way they designed their learning activities in ways that enable students to complete learning tasks on their own, with minimal need for teacher's support or help. As reported by other studies, the process of making learning materials and activities suitable for TDP has been a demanding process that allowed for little time and demanded desperate need for immediate action (Adedoyin & Soykan, 2020; Aliyyah et al., 2020; Bergdahl & Nouri, 2020; Day et al., 2020; Espinosa Castro, 2020; Niemi & Kousa, 2020; Tejedor et al., 2020; Trust & Whalen, 2020; Watermeyer et al., 2020). These changes had to happen at even the most basic level of lesson planning and learning design. For example, in this study, some reported changing the way they gave instructions; they now ensure instructions are written (instead of just said in class) and accessible to students throughout the activity. Others shared that they created videos to show students how to use



tools so that they can be (re)played anytime. This shift in teacher role led to other changes in teaching strategies.

### **7.2.3 Track, track, and then track**

One of the most common changes that this study has found is teachers' growing appreciation of tools for tracking. As teachers adapted their materials and plans, they all noted how much they started to focus on tools that provide tracking (reports). Tools like Nearpod, Kahoot, Quizizz, and polls on BlackBoard Collaborate have become very important for most teachers in the study. They were the most accessible way they can ensure students have completed their learning tasks. The UNESCO, UNICEF and the World Bank (2020)'s report, interestingly, discuss the issue of tracking, or as they call it *learning monitoring*. They share that a much higher percentage of lower-income countries reported that "student learning progress is not tracked by teachers" (p. 16). This led me to wonder: has tracking become a posh feature that only the rich can afford? Looking at data from this study, it can be concluded that tracking was a major issue that became a priority in remote classes in the study. In fact, to address the changing nature of student engagement, teachers needed to change the ways they measured students' involvement and progress. They resorted to tools that allow for *tracking*, with a high preference for *live* tracking where data are updated instantly instead of data provided after "submit" is clicked. The suggestions of Vollbrecht et al. (2020) mirror these preferences as they recommend that teachers incorporate more questioning into the lessons in the form of polling. Participants in the study did exactly that. However, although, as Vollbrecht et al. (2020) suggest,

data provided by these tools might have helped “instructors better understand where student misconceptions may be arising” (p. 724), teachers soon found it to be too demanding and too time-consuming to maintain in the long run.

Based on my understanding of the data, I believe the issue of engaging students remains unresolved in teachers’ view, and I believe as teachers continue to TDP, they will keep renegotiating their practices until they are able to transform the dynamics of engagement in a way that satisfies their understanding of effective learning.

#### **7.2.4 Let it go**

Although not adopted by all, another strategy adopted by some participants was their reliance on individual work, letting go of pair and groupwork. The tools that facilitate pair and groupwork were not as effective or easy to use as needed (in their current state). Many teachers believed they were too time-demanding and were not as effective in encouraging collaboration among students. Their belief could stem from an understanding that the social aspect of collaborative learning is “hindered because of the reduced number of social clues (e.g., facial expressions, inflection, non-verbal clues) and increased social distance” (Nevgi et al., 2006, p. 932). The few who did use groupwork found that not all group members were active or present, so they needed to visit each group to redistribute students if needed. They also made sure to assign work that showed live changes (such as Office 365) and assign roles to each group member before they were sent to their groups. This strategy echoes the conclusion of Nevgi et al. (2006) who argue that groupwork “is a

continuous reflective process, in which members must be aware of their roles, tasks and how to monitor the work in a strategic way” (p. 945). Teachers also made sure to provide written and visible instructions for each group activity. Vollbrecht et al. (2020) acknowledge that running groupwork can be too demanding, and they recommend the presence of at least one other member of staff to assist during the lesson “with polls and monitoring the chat” (p. 723). Looking at comments from the participants, I believe this solution would help greatly in alleviating some of the overwhelm experienced during remote lessons.

#### **7.2.5 Go with the flow**

Finally, nearly all participants utilized the PD opportunities offered at the institute to gain a basic understanding of the newly employed tools for TDP. However, they all reported the need to rely on trial and error, colleague expertise and experience, and online searches. Their attempts to learn how to use these tools were focused not only on the tool itself, but also on how it best serves the learning environment they’re trying to create and their students’ needs. That is, teachers needed to learn new functions that they never even considered using in class, such as screen sharing, and they needed to find effective ways to utilize these new and old functions/tools. For example, although teachers were very familiar with Kahoot prior to the pandemic, the way they used it in class had to be modified to suit the remote nature of the TDP: the fact that students are no longer in the same room, and the need to keep track of students’ progress.

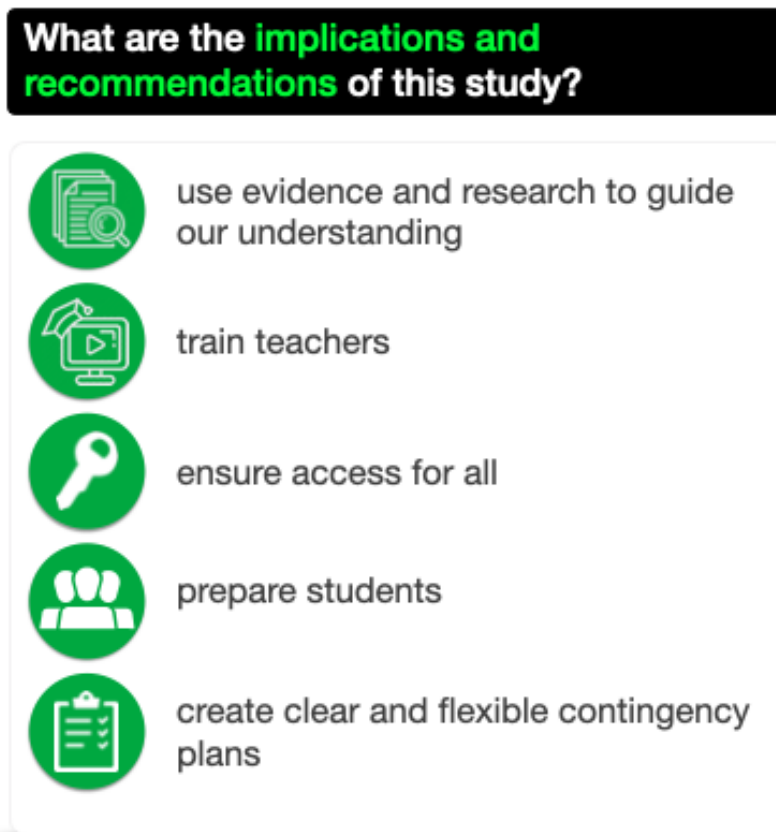
Generally, numerous studies have acknowledged the need for training for teachers at the beginning of TDP (Aliyyah et al., 2020; Bergdahl & Nouri, 2020; Cheema, 2020; Day et al., 2020; Hamilton et al., 2020; Leacock & Warrican, 2020), and some researchers suggest the need for further training, whether to address gaps that were identified thus far or in general (DeMatthews et al., 2020; Hamilton et al., 2020). Based on our current progression with Covid-19 and the educational responses, I believe even when the pandemic is rendered obsolete, many aspects of teaching and learning will not go back to their old ways as this experience has allowed us to prove the “but it can’t be any other way” excuses wrong. It can be, all other ways. I share this prediction to say that training for teachers on how to best teach remotely *and* in unpleasant conditions (e.g., pandemics) is very much needed no matter how we move forward.

### **7.3 Contributions to practice: Implications and recommendations**

Having answered the research questions of this study, I would like to highlight a few recommendations from the research. Going back to the quote that started this chapter, the similarities between the 2003 (SARS) and 2020 (Covid-19) experiences were eerie. How can an experience that spotlighted an evident gap in education be overlooked as if it didn’t happen, as if it won’t happen again. The need to be prepared for another pandemic or another grand emergency has never been more pressing. The need to practice TDP might persist for some time and is most probably going to present itself another time soon. As observed by Bhagat and Kim (2020), “the most important and difficult challenge stems from the level of preparedness on the

parts of the educational institutions to handle crisis similar to the one brought about by this pandemic” (p. 366). Hence, with no end in sight for Covid-19 and with the high possibility of another pandemic happening, the question is: how can we, as individuals and as a system, be better prepared for teaching during a pandemic? Looking at results from this study and building upon previous research, I believe we need to take five steps to answer this question (Figure 7.8).

**Figure 7.8 Recommendations concluded from this study**



### **7.3.1 Use evidence and research to guide our understanding**

Firstly, our attempt to create a remote learning environment during a pandemic should be guided by evidence and research-based understanding

of remote teaching and learning and of teaching and learning during a pandemic (DeMatthews et al., 2020; Trust & Whalen, 2020; W Zhang et al., 2020). As Bhagat and Kim (2020) assert, “it is evident that while transitions to online delivery are a necessity, overlooking online pedagogy can be equally detrimental” (p. 366). Measures of effective TDP should account for common issues faced by teachers, including a). student engagement, b). groupwork, c). checking for understanding, and d). managing the non-teaching demands (imposed by both the remote nature of the experience *and* the pandemic).

As well, as we attempt to reach a comprehensive understanding of effective practices for TDP, I find Schwartzman’s remark worth considering. They worry: “currently we ask: How closely does the online experience approximate face-to-face? Immediately this loaded question presumes face-to-face as the yardstick” (2020, p. 513). As a CHAT enthusiast, I find their concern problematic. Using our *prior experience with teaching* as a tool to facilitate a better TDP experience is a form a mediation that we cannot bypass. That is, not using our prior experience with face-to-face instruction as a *yardstick* is not possible as explained by mediation practices for which our species are well-known. However, I do see their point in stressing the idea that what we had prior to the pandemic should not be viewed as a utopian dream from which we can build our TDP empire. So, building on their argument *and* on mediation norms, I would say that we should use our experience with face-to-face teaching as *mirror data* for our change laboratory, or in non-CHAT terms, we should base our discussions of effective TDP practices on our pre-pandemic experience, *along with* our understanding of research-based

practices, as a valid point of reference that has the good, the bad, and the ugly. As Selwyn (2008) always recommends, we should look at the *state of the actual* (of pre-pandemic and early TDP), as opposed to the *state of the art*, to carefully and critically understand our pre-pandemic reality and build for a better post-pandemic future. He explicates, “educational technology scholarship should look beyond questions of how technology *could* and *should* be used, and instead ask questions about how technology is actually being used in practice” (2013, p. 15, emphasis in original).

### **7.3.2 Train teachers**

Secondly, efforts for renegotiating our understanding of effective TDP practices should be supported by properly structured training opportunities for teachers. There is no doubt that most teachers are well-versed in ways to use e-tools for teaching and learning, but these ways are not necessarily as effective when done remotely. Results from the study and a review of the literature suggest that teachers could benefit greatly from professional development opportunities that cover:

- How to engage students.
- How to foster collaborative learning.
- How to support students.
- How to manage a remote lesson.
- How to integrate effective e-tools.

All of these topics should be framed within a *remote experience* perspective—teachers are already familiar with the general perspective of it. I have to urge that this kind of training should not dismiss or ignore our pre-pandemic practices. Rather, a great way to ensure such training is effective is to present it in ways that guide teachers to utilize their pre-pandemic practices and early TDP practices as points of reference. This recommendation is based on CHAT's view that humans develop new concepts based on their appropriation of already-established ones. If a course dismisses this tendency (i.e., does not offer guided and properly structured ways to best renegotiate our established understanding of teaching and learning), participants will do so on their own and might not reach the same conclusions that are anticipated from the training.

### **7.3.3 Ensure access for all**

Surely, issues of access, whether to devices, connection, or learning spaces, should be prioritized. As highlighted in the literature review, numerous publications have strongly emphasized that access has been a major challenge, and as UNESCO, UNICEF and the World Bank (2020) point out, it is an issue that has to be addressed. What I find lacking in these calls to provide access is that they mostly define *access* as an issue concerned with devices and internet connections, with rare, if any, mention of suitable learning spaces as *an access issue*. From what I've read so far, providing suitable learning spaces is not tied to the resolution to provide access for all. Results from this study, as supported by the literature, reflect the impact of a disruptive learning space on the process and outcomes of learning for many



students. The reason I stress the subtle difference of considering learning spaces as a pertinent factor to providing *equal opportunities for all*, as opposed to a separate area of concern, is mainly based on the understanding that learning can be severely impacted if not hosted by a suitable environment, a suitable learning space. This space should account for what Barrett et al. (2013) have found to “have been shown significantly to influence pupil progression in practice” (p. 687) in their extensive study of environmental factors that shape learning spaces. These factors are deemed necessary for their effect on design and usage. They include: light, choice, flexibility, connection, complexity and color.

#### **7.3.4 Prepare students**

Additionally, students need to be equipped with the necessarily skills to learn remotely and during a pandemic. Echoing participants’ remarks, Tomas et al. (2019) conclude from their study about students’ experience with flipped learning that “first year students may also resist the requirement to take control of their learning due to their previous secondary school experiences, which may have shaped their learning expectations and their perceptions of the teacher’s role” (p. 15). As nearly all participants stressed, for students to get the best out of a remote learning experience, they need to be equipped with certain skills and strategies, including a). the ability to self-direct their own learning, b). the knowledge of when and how to ask for help, c). the social skills to engage effectively in remote groupwork, and, surely, d). the technological skills needed to best utilize remote learning environments and tools.

Sharing the experience of Chinese schools with TDP, W Zhang et al. (2020) indicate that one of the adjustments that local schools had to introduce was to lessen “the total time length of teaching per day” with the main aim “to cultivate students’ independent learning abilities” (p. 3). They do not elaborate on other strategies, but they stress the need for more research into how we can best support students to get the best out of remote learning environments. In a non-TDP-related study, Nevgi et al. (2006) support the need for students to develop strategies that can facilitate collaborative engagement in remote learning environments. They explain, “the lack of social clues may prevent students from interpreting what is going on in web-based learning environments, and may lead to feelings of isolation and loneliness” (p. 938). Although I do not support their recommendation to use a numerical assessment tool to measure students preparedness or raise their awareness, I do support their conclusions that our students need to acquire the skills needed to actively engage in collaborative learning.

### **7.3.5 Create clear and flexible contingency plans**

Finally, with all of these considerations in mind, one should be aware that any kind of pandemic will be unique enough to require immediate and unexpected changes. Pokrywka (2016) explains, “a critical factor in pandemic flu planning is the understanding by the organizing committee that *the ‘operational plan’ is going to change during the emergency* once the epidemic is declared by the CDC, WHO or some other agency” (p. 79, emphasis added). Nonetheless, even with the very unexpected nature of future pandemics, one should at least broadly map the terrain and have clear general guidelines or

contingency plans for any kind of disruption. These plans should take into account teachers' experiences and accounts of TDP, and they should be clear to all and flexible enough to be easily and smoothly adapted to any disruption. Such plans should minimize the need for drastic and frequent changes or unnecessary—yet expected by Gates (2015)—surprises.

#### **7.4 Contributions to theory: CHAT and the environment**

Data from this study highlighted the need to reconsider the activity system model as it stands today. The environment, as my study reveals, is integral to human activity because it defines and affects many elements, which are dependent on the environment in ways that cannot be dismissed or passively attributed to a hidden element in the background. Hence, as discussed in Chapter 2, I proposed adding the environment to the model. Using arguments made by Vygotsky, Leontiev, and Engeström, I explained how the environment should indeed be a clear and constant part of the activity system model.

#### **7.5 Contributions to research**

##### **7.5.1 Class and remote beginners/experts**

Findings from this study highlight the clear divide between in-class and remote learning experiences. I conclude the need for such typology because I believe we need to identify the different type and required mastery of skills needed for maintaining an effective learning experience in a classroom and remotely. These differences were found in areas of a). technical skills, b).

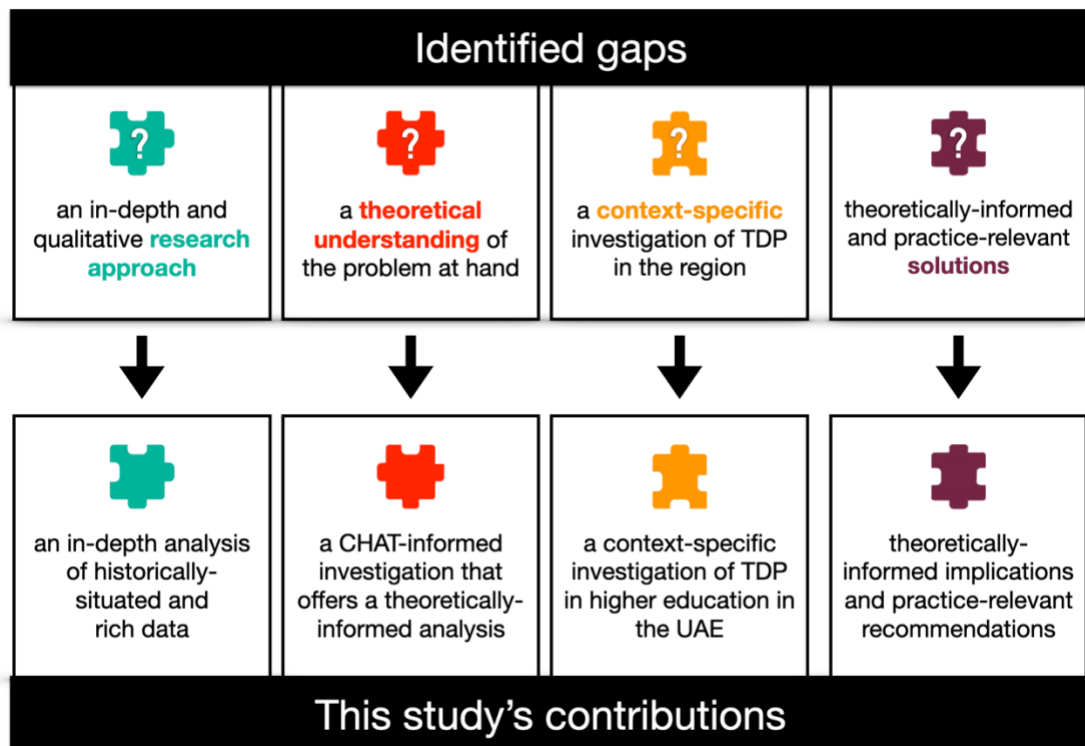
social learning skills, c). communication skills, and d). self-directed learning skills. Although these sets of skills are needed in both classroom *and* remote environments of learning, I maintain that there is a big difference in the way they are defined *and* the degree to which they are needed in both environments, that is type and degree of mastery. I also can safely conclude that the effect of lacking the needed type or degree of mastery for each environment is evident enough to warrant special attention and probably its own thread of research. I propose that we acknowledge such differences by a typology that marks these differences by environment (class or remote) and by degree of mastery (expert or beginner). I believe such typology can encourage conversations into the issue and more research into a). the differences and b). ways to train learners efficiently for the target environment. I believe more research into the matter should be done to develop a solid research-based and theory-informed understanding of these differences. Creating a program that is research-informed and evidence-based to target these skills could, I believe, empower students who are transitioning from class to remote environments, and it could also further develop their awareness of the different demands and expectations of a remote learning environment as compared to an in-class learning experience.

### **7.5.2 Filling the gap**

As well, reflecting on the four gaps that were identified in Chapter 4, this study has attempted to contribute to the growing line of TDP research in various ways (see Figure 7.9). Firstly, this study utilized a theoretically-informed understanding of human activity to investigate and analyze the practice of

TDP in its early stage. Secondly, such an approach has allowed the study to investigate the practice and analyze the data in a systematic and unbiased manner that goes beyond surface-level observations of the phenomenon and, hopefully, offers a better understanding of the newly-developing practices of remote teaching during the pandemic. Finally, the study's CHAT-informed analysis and practice-driven outlook have made it possible for me to highlight theoretically-informed implications and practice-relevant recommendations. These implications and recommendations should a). pave the way for a more solid approach to pandemic-proofing our approach to teaching and b). highlight the areas of teaching and learning that require further research in the wake of Covid-19.

**Figure 7.9 This study's contributions to the growing line of TDP research**



## 7.6 Further research

One of the signs of a good research project is that it opens the door to more questions, to further research. Based on this study, one of the areas that warrant further research is the theoretical addition of the environment to an activity system. Further research and discussion of the scope of the newly added (sub)elements could help solidify their relevance and coherence with the theory. As well, it would be interesting to see how the analysis of the environment can be accounted for in other studies that might not be as heavily affected by the environment as this study. Additionally, the class and remote beginner/expert continuums need further research to see how they differ in type and degree and how they apply to different educational settings. For example, how are the technical needs for a class environment different from a remote environment? How can we train a remote beginner to become a technical remote expert? Finally, there is a huge need to further look into contingency plans that can be developed for schools, teachers, and students to better handle the ramifications of a similar event.

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