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WhatsApp becomes the classroom: A case study of learning cultures in vulnerable communities in the Peruvian Andes

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Abstract

The COVID-19 pandemic has exacerbated digital inequalities and brought new attention to the digital divide, which has become a critical topic for social justice. In the context of school closures, along with more traditional methods of distance learning, emerging technologies like mobile phones and the accessibility of certain platforms, like WhatsApp, filled the immediate need to serve as a primary teaching and learning tool. Albeit WhatsApp had already been used in different contexts as a supporting tool for learning, this was the first time WhatsApp became the classroom. Considering that potentially learning will move to a hybrid space in the near future – given the escalation of the climate crisis and ongoing conflicts worldwide – it becomes necessary to understand how the distance education process unfolds in vulnerable contexts, what is the student experience with this type of learning, and what learning culture is fostered under determined conditions of access. The lack of consideration of these aspects could increase education inequalities which will, of course, impact vulnerable students the most.

Following a constructivist approach, I designed a qualitative single case study using focus groups, emoji-elicitation techniques, and in-depth interviews. Using a quasi-participatory approach, I worked with a purposeful sample of 22 female secondary school students from rural backgrounds in the southern Peruvian Andes.

Using a learning cultures framework and the concept of the digital divide, especially its type of technology determinant, I sought to describe the features of the WhatsApp classroom and how this learning culture was expressed in the actions, emotions and learning of female students from vulnerable backgrounds. The learning cultures framework allowed the exploration of what types of learning were made possible and which were impossible in the WhatsApp learning culture. Seemingly, a WhatsApp learning culture will allow for the retention of students and for them to feel safer and thus more eager to communicate and participate. At the same time, the configuration of the learning culture will disallow the interaction between actors (peers and teachers), the possibility of asking questions in an appropriate timeframe and the in-depth comprehension of subjects, impacting significant learning. Following the main discussions, a small section is devoted to thinking beyond the walls of the WhatsApp classroom and into the potential other applications and configurations using the same device might have in aiding learning.

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1. Introduction

“Yo no tenía celular, estaba en tercero en el colegio, íbamos a pasar a cuarto y yo no tenía celular y mi mamá se vio obligada a comprarme un celular porque se enteró que en mi colegio habían establecido que las clases iban a ser por WhatsApp y mi mamá me compró el celular. Y yo al principio no sabía, me daba miedo hasta mandar un mensaje (se ríe) estaba con que si mandaba mal o no mandaba mal y se iban a reír mis compañeros y me iban a hacer memes y me venían pues cosas a la cabeza. Pensé que todo era parecido a clases presenciales y con el tiempo me di cuenta que no”.¹(Yeli)

Over the past two years, society has become more digitally dependent, the COVID-19 pandemic has exacerbated digital inequalities and brought new attention to the digital divide (Beaunoyer et al., 2020), which has been described as a critical topic for social justice in the twenty-first century (Rogers, 2016 in Lythreath et al., 2022).

Since the introduction of the term the *digital native* (Prensky 2001), youth have been widely considered as natives of the digital world. This assumption, however, fails to recognize that the social construction of *youth* will also depend on their context (Woodman & Wyn, 2014). Yeli’s testimony shows that her experience with mobile phones would not place her as a native speaker of the digital world, even if she is a young woman (16 years old).

The policies implemented to contain the pandemic brought about by COVID-19 included, amongst other things, stay-at-home orders and school closures. The pandemic hit Peru as the summer holidays were ending and students were getting ready to go back to school². As

¹ “I didn’t have a phone. I was in form three at school, I had to begin form four and I didn’t have a phone and my mom had to buy a phone for me because she heard that at my school they had decided classes were going to be through WhatsApp so my mom bought me a cell phone. And at the beginning I did not know, I was afraid even to send a text (laughs) I was thinking, if I send it wrong or if don’t send it wrong and my classmates will laugh and they were going to make memes about me, so many things came to my mind. I thought everything was going to be like normal classes and with time I realized that it was different and I learnt to use some applications because at school they would asks us to fill out documents, to make videos, we had to use different applications, photo editions and well that”.

² The school year in Peru goes from March to December

in countries in the northern hemisphere, schools were shutting down to avoid spreading the infection; in Peru, they remained closed for almost two years.

To face school closures, the Ministry of Education (MoE) rolled out the *Aprendo en Casa* programme. This initiative was supposed to be a temporary strategy to allow school continuity during school closures. However, the reopening of schools was pushed further away time and again. Peru had one of the most extended school closures worldwide; public schools partially opened in March 2022 after two years of being closed. Thus, what was proposed as a temporary *emergency* strategy became permanent for two school years. As the quarantine expanded, the term emergency remote education was replaced by online education, distance education (DE), virtual education, and digital education. And these terms have been used indistinctively as such by stakeholders (Bustamante, 2020).

The abrupt migration from face-to-face education to education delivered in digital spaces highlighted the digital divide existing across and within countries. In fact, the pandemic represents the first large-scale event for which digital inequalities have become a significant vulnerability factor (Beaunoyer et al., 2020). Moreover, school closures reinforced the multiple and profound educational divisions existing throughout education systems worldwide, and students from vulnerable and marginalised backgrounds suffered the consequences the most (Tarabini, 2021; Beaunoyer et al., 2020).

Considering the increase in inequalities brought about by the COVID-19 pandemic and the centrality the digital divide has taken in the education system, it is vital to pay attention to the DE dynamics, especially in vulnerable contexts. Furthermore, even if the digital divide has been widely researched in terms of technology access, Ivori (2020) suggests there is a need to address the young generation and the variety of digital divides shaping their lives to escape the *myth* of the digital native (Selwyn, 2009).

Also, it is crucial to remember that school closures are not exclusive to the pandemic. Due to conflict, natural disasters, and other crises, they happen in different regions, and it is predicted that if there is no transformation in the relationship to the environment, socio-environmental and health crises and catastrophes will be recurrent on the planet (IPBES, 2020). It seems the intermittence between remote and face-to-face education is here to stay (UNICEF 2021). Therefore, it is necessary to understand how the DE process unfolds in vulnerable contexts, what is the student experience with this type of learning, and what learning culture is fostered under determined conditions of access.

1.1 National Context

What was the situation in Peru in terms of access to technology and the internet when the pandemic began? Table 1 shows the access to a PC and an internet connection in Peruvian households according to residence area from 2019 to 2021. It clearly shows that access to PCs and the internet is by far the lowest in rural areas. By March 2021 (one year after the first lockdown was announced and at the beginning of the second year of distance learning), only 7.2% of households in rural areas had access to a PC, and 13.2% had access to an internet connection.

On the other hand, table 2 shows the access to mobile phones at a household level which is evidently higher (84.7%) than access to a PC and an internet connection in rural areas. Consider that this data is given at the “household” level. There is often one phone/PC per household, meaning access will have to be shared between members and activities (work and education), adding another layer of inequality. This already gives us a glimpse of the digital divide present in the country, which will influence students' learning possibilities.

Table 1 – Households with Internet and PC access according to residence area

Trimester – January, February, March.

** Does not include Lima (Metropolitana)*

Source: Informe Técnico INEI 2020, 2021

Residence Area	First trimester 2019		First trimester 2020		First trimester 2021	
	%		%		%	
	Computer	Internet	Computer	Internet	Computer	Internet
Total	34	36.7	35.6	40.1	34.4	47.1
Lima (Metropolitan)	49.7	61.8	52.9	62.9	50.2	63.3
Urban areas*	38.9	35.7	38.3	40.5	38.1	52.5
Rural areas	6.1	3.7	7.5	5.9	7.2	13.2

Table 2 – Households with access to a mobile phone according to residence area

Trimester – January, February, March.

** Does not include Lima (Metropolitana)*

Source: Informe Técnico INEI 2020, 2021.

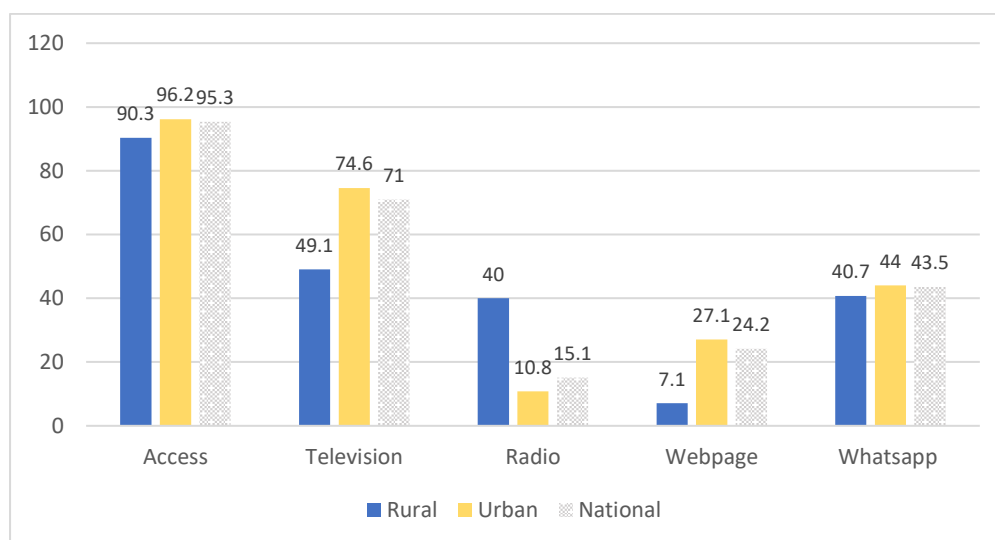
Residence Area	First trimester 2019	First trimester 2020	First trimester 2021
	%	%	%
Total	91.5	93.3	94

Residence Area	First trimester 2019 %	First trimester 2020 %	First trimester 2021 %
Lima (Metropolitan)	95.6	96.2	97.5
Urban areas*	94.1	95.2	96
Rural areas	80.3	85	84.7

Peru, which has an approximate population of 33 million (INEI, 2020), has around 40 million active mobile lines (Larocca, May 19, 2020, in Martínez & Saxena 2021). Evidently, mobile penetration goes far above than the penetration of PCs or tablets.

The following graph (Graph 1) shows the different platforms used to access education during 2020 in Peru. Considering the high penetration of mobile phones in the country is not surprising that WhatsApp scored high in rural and urban areas. It is important to mention that in Peru, all the available telephone operators offer the WhatsApp service for *free* with a minimum recharge of 5 PEN (approximately 1.30 USD). This means that WhatsApp usage does not count towards data expenditure which makes WhatsApp an extremely accessible platform.

Graph 1 – Technology and platform usage. Aprendo en Casa: level and means of access 2020. In % of surveyed families - Source: Instituto Peruano de Economía (IPE) 2020



The wide use of WhatsApp during school closures shows that the Application is becoming an emerging technology for education. At the same time, the extended use of WhatsApp for education, especially in vulnerable contexts, opens the possibility of developing new learning cultures, which, depending on their configuration, will make some things possible

and other things impossible within the learning process. As Bayrakdar and Guveli (2020) state, the learning gap of the most vulnerable students is also produced by the schools they attend and, more specifically, by the modes of educational provision during the lockdown. With this in mind, and considering there is no available study describing and exploring the configuration of the WhatsApp classroom, I aimed to answer the following research questions:

- (a) RQ1: What are the features/characteristics of the WhatsApp classroom in emergency contexts?
- (b) RQ2: How is the WhatsApp learning culture expressed in the actions, emotions, and learning of public secondary school female students from rural backgrounds? What does this learning culture allow or disallow?

2. State of the Art and Theoretical Framework

Since the COVID-19 pandemic affected education systems worldwide, distance education (DE), also referred to as distance learning, has taken over newspaper heads, emergency responses, and policies for the future of education. It is important to underline that distance education and distance learning are used interchangeably in the literature (Saykli, 2018; Burns, 2011).

DE can be traced to the late 1800s (Kentnor, 2015) and has been widely associated with adult education and continuous learning (Burns, 2011; Caruth & Caruth, 2013). According to different authors, at the base of DE is the willingness to provide equal access to education to those citizens who, for different reasons, have limited or no access to educational institutions and resources (Holmberg, 1995; Moodley, 2002; Burns, 2011; Anderson & Simpson, 2012; Simonson et al., 2015; Saykli, 2018). Moreover, DE is characterized by "the quasi-permanent separation of teacher and learner throughout the length of the learning process" (Keegan, 1986, p.49 in Saykli, 2018). DE methods have also been applied in formal education during emergencies; think about UK's BBC school radio initiative during World War II (Bustamante 2020). In fact, according to Bozkurt et.al (2020 in Toquero 2021) emergency remote education can be considered a branch of distance education .

Communication technologies bridge the geographical and temporal distance between teachers, students, and content (Saykli, 2018; Kerka, 1996). Therefore, the concept of DE has evolved with technology (Burns, 2011; Saykli, 2018). When the available technology was print and paper, DE occurred within a correspondence model. The availability of radios promoted broadcasting education, and the onset of television allowed televisual models of DE like broadcasting television (Burns, 2011; Kentnor, 2015). When desktop computers became affordable enough to be purchased by schools, computer-based models of DE began to develop³ (Burns, 2011). During the 1990s and 2000s, internet access became popular (Howard &

³ The author makes a distinction between the availability of technologies depending on countries context. Not every country adopted the same technologies at the same time.

Mozejko, 2015 in Saykli, 2018), introducing web-based models of DE, or e-learning, like online courses and conferences, virtual classes, virtual schools, and universities (Burns, 2011). Different academics reflect on generations of DE according to the technology used (Anderson & Simpson, 2012; Saykli, 2018; Commonwealth of Learning, 2008). However, as Burns (2011) duly notes, DE modalities can coexist as they do not depend linearly on each other. For instance, the *Aprendo en Casa* initiative embraced different generations of DE: radio, television, and the Internet (Martínez and Saxena, 2020).

2.1 Distance Education in Perú

Distance Education projects and ICT inclusion in education are not new to the Peruvian context. Peru has utilized radio, and later television, for formal distance education, especially to reach those in the country's most remote areas, including the Andes and the Amazon (Martínez and Saxena, 2020).

In 1964, the National TV education Institute (*Instituto de Teleducación*) was founded as a space to "complement school education outside the classroom, extend and update the knowledge of the population and facilitate social promotion processes" (Churchill, 1980 p., 54). This complementary initiative to formal education used radio and television emissions as well as press and correspondence to fulfil its promise. This educational channel worked throughout the military dictatorships of Velasco Alvarado and Morales Bermudez⁴ through State media. However, upon the return of democracy, telecommunication channels were given back to their owners, and most educational initiatives were shut down (Bustamante, 2020). The Institute remained active and distributed pedagogical content to students who could not attend school during the El Niño phenomenon of 1983 (Trinidad, 2005), another example of DE in emergency contexts. It was during Alan García's first government (1985 – 1990) that the remaining initiatives of the Institute were shut down.

Other programmes involving technology and distance education were the *Infoescuela* and *Edured* initiatives. The *Infoescuela* project implemented in 1996 incorporated LEGO robotic kits in urban primary schools, while the *Edured* initiative, implemented the same year, sought to develop distant collaborative projects between students from urban high schools with an internet connection (Salas-Pilco, 2014; Rivoir, 2019). In 2001, the MoE implemented the *Huascarán* Project. This was the largest and most ambitious initiative regarding budget and scope. It sought to develop, implement, and evaluate a national network of public schools

⁴ From 1968 to 1980 Perú was governed by the *Gobierno Revolucionario de las Fuerzas Armadas*, a nationalistic, left-wing military government.

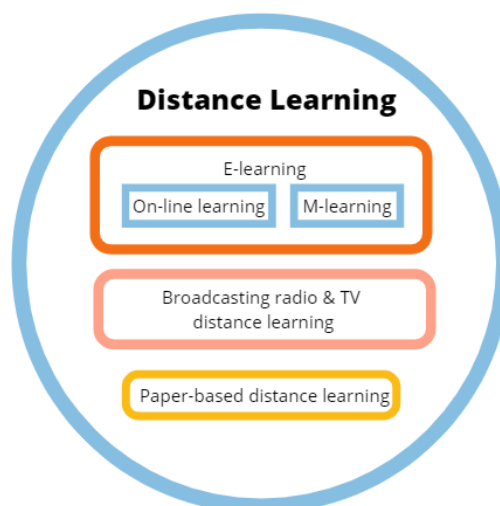
equipped with computer labs, a server, and access to the internet to improve education quality (Salas-Pilco, 2014; Rivoir, 2019).

Plan Huascarán was replaced by the One Laptop per Child Programme (OLPC), which Peru adopted in 2007, becoming the world's leading country in terms of the scale of implementation. The project has yielded mixed results. While it increased access and computer use, this did not translate into better learning outcomes in Maths or Language (IDB, 2010; IDB, 2012). Its implementation did not consider infrastructure difficulties, such as schools not having internet access or even enough electrical outlets to charge the laptops (Warschauer & Ames, 2010; Murphy, 2012; Cano Correa, 2015). Moreover, according to an International Development Bank report (2010), only 10.5% of teachers received technical support, and just 7% received appropriate pedagogical training for the use of laptops.

Unfortunately, these projects were mostly short-term. A lack of clear purpose and long-term planning usually meant that the administration did not continue programs initiated by the previous government (Aguirre Bastos & Gupta, 2009). Given this turnover, most projects do not count with either outcome or impact evaluations (Salas-Pilco, 2014). In fact, most available research in DE in Peru mainly focuses on higher education and small-scale initiatives within higher education institutions (Blumen, 2011; Rama & Ruiz, 2013).

DE has always been mediated by the available technology. Nowadays, learning is fostered anytime, anywhere by the ubiquity of mobile technologies (Anderson & Simpson, 2012; Hung & Zhang, 2012; Klimova, 2019). This methodology of their use is called mobile learning (m-learning) (Kacetl & Klímová, 2019). Figure 1 provides a summary of the distance learning umbrella.

Figure 1: Distance Learning umbrella. Own elaboration based on Zawacki-Richter et al. 2005.



The all-inclusive umbrella of DE also encompasses m-learning. In a recent literature review, Kacatl and Klimova (2019) conclude that most research considers m-learning a salient education figure. Research around m-learning highlights its positive characteristics like mobility, access, immediacy, situativity, convenience, and contextuality (Pedro et al., 2018). It also suggests positive results when implemented as a supporting tool (Kacatl & Klimova, 2019; Klimova, 2019), albeit most research focuses mainly on foreign language learning, university students (Klimova, 2019; Kuimova et al., 2018; Pedro et al., 2018) and informal learning contexts (Chee et al., 2017).

Given its wide use and availability, WhatsApp-driven teaching and learning became the "new normal" during the transition from face-to-face education to DE imposed by the COVID-19 pandemic (Dhillon 2020; Budianto & Arifani 2021). The instant messaging platform filled the immediate need to serve as a primary teaching and learning tool (Budianto & Arifani 2021). Research focusing on WhatsApp in formal education is still quite limited. Most of the available literature studies WhatsApp as a supporting tool for learning (Bouhnik & Deshen, 2014; Lanterano, 2018; Escobar Mamani & Gómez-Arteta, 2020; Mulyono et al., 2021) mainly focusing on language learning (Bottentuit et al., 2016; Lanterano, 2018) and communication skills (Córdova et al., 2016). Also, most research is done on university students (Bottentuit et al., 2016; Gómez del Castillo, 2017; Lanterano, 2018).

The only available article examining WhatsApp in formal education in Peru is based on data collected in 2019 (pre-pandemic) and on WhatsApp as a complementary tool (Escobar-Mamani & Gómez-Arteta, 2020). To the best of our knowledge, there is no research available on the configuration of the WhatsApp classroom and its dynamics from the student's perspective. Therefore, considering the research gaps in the literature review, this research project seeks to:

- (a) Study the use of WhatsApp in formal education, a context that is seldom considered (Pedro et al. 2018)
- (b) Considering WhatsApp as the main teaching and learning tool during the pandemic.
- (c) Focusing on secondary school students from vulnerable settings, who are not the focus of distance education research.

In this way, and by exploring the research questions stated in the previous section, we will contribute to the literature by mapping the WhatsApp classroom from the point of view of a group of female students from vulnerable contexts enrolled in formal secondary education.

2.2 The digital divide

Digital inequalities exist alongside a multidimensional continuum reflecting existing social inequalities (Beaunoyer et al., 2020), including socioeconomic status (Hargittai, 2010), level of education (Cruz-Jesus et al., 2016), and age (Yates et al., 2015), among others. In fact, economically vulnerable households, presumably less equipped in terms of technological devices and internet access, will suffer more severely from the immediate and long-term consequences of the COVID-19 crisis (Fernandes, 2020 in Beaunoyer et al., 2020). Moreover, traditionally oppressed identity groups have been disproportionately affected by the shift to distance education (Ortega, 2020).

At its inception, the digital divide was defined as a binary division between people who had access to ICT and the internet and those who did not (Hoffmann et al., 2000). This was termed the first digital divide. Later, the concept shifted to focus on the differences between digital skills and digital usage (Hargittai, 2001). This was considered the second digital divide and has mainly focused on the autonomy of use, patterns of use, and skills (DiMaggio et al., 2004 in Lythreathis et al., 2022). The third digital divide, instead, focuses on the outcomes of internet use and occurs when digital skills and usage do not lead to beneficial outcomes (Van Deursen et al., 2016). Therefore, the digital divide is a multidimensional concept that covers different aspects (access, use, performance) and has several dimensions (global, regional, and social) (Aissaoui, 2021).

For this research, Warschauer's (2012, p. 5) definition of the digital divide as a "social stratification due to unequal ability to access, adapt and create knowledge via the use of information and communication technologies (ICT)" was used. Moving away from a binary digital divide to a definition emphasizing social stratification implies a continuum (Back et al., 2022). There is no binary division between have and have nots but rather a different degree of access. Imagine, for example, a student receiving school content through a computer using Zoom, a student receiving the same content through a mobile phone using WhatsApp, and a third student receiving the content on pre-recorded audio or videos through TV or radio.

When studying the digital divide, it is important to consider its determinants. In other words, what contributes to the digital divide? Determinants of the digital divide in the literature mostly consider sociodemographic and socioeconomic characteristics such as income, age, educational level, ethnicity, and urbanization level (Hidalgo et al., 2020 in Lythreathis et al.,

2022). The exhaustive literature review studying the digital divide determinants developed by Lythreitis et al. (2022) presents a comprehensive list (Table 3).

Table 3: Digital divide determinants. Own elaboration based on Lytheatris et al. 2022.

Digital Divide determinants	Variables
Sociodemographic determinants	Age, gender, urbanization, urban/rural dimension, remoteness, population density, size of the country, geographic disparity
Socioeconomic determinants	Education, Income, Employment status, Occupation
Personal Elements	Trust, motivation, privacy concerns, risk perceptions, values, attitudes and beliefs, religion
Social Support	Access to support, social interaction, social connections
Type of technology	Computer/mobile dimension, overreliance on smartphones, lack of equipment
Rights	Civil liberties, net neutrality, political rights
Digital Training	Assistive technologies, ICT training, competence-related elements, involvement in online learning community
Infrastructure	Electricity access, sub-marine cables, profit-based discrimination
Large Scale Events	Covid-19

From its design, our research focused on considering the sociodemographic and socioeconomic characteristics of youth. Secondary school female students from rural households are already burdened with structural social and economic inequalities which impact the digital divide.

It is essential to make this distinction as in 2001, Prensky introduced the term of the digital native to refer to a new generation of students; "native speakers" of the digital language

of computers, video games, and the internet (Presnky 2001). This point of view implies that differences in ICT use are not a concern among the young, given their widespread exposure and resulting comfort with digital media (Hargittai, 2010). However, the assumption of the digital native, fails to recognize that youth is not a homogenous experience; it intersects with different aspects of our identity like socioeconomic status, language, ethnicity, and gender, amongst others. The digital divide impacts the construction of the digital native – if we recall the testimony provided in the introduction Yeli only accessed a mobile phone as a result of the pandemic.

At the same time, the study focuses on the "type of technology determinant." This includes the computer/mobile dimension, overreliance on smartphones, and lack of equipment (Lythreatis et al., 2022). Studies reveal that people who access the internet exclusively through mobile phones tend to have lower levels of digital skills and conduct less diverse activities than those who also use the computer (Correa et al., 2020).

These findings are relevant as the rapid penetration of the mobile internet in the 2000s led some scholars to argue that the digital divide was shrinking (Stump et al., 2008). However, the “type of technology” is essential when considering the first digital divide as it is not only a matter of having or not having ICT equipment or an Internet connection; it is also about what kind of equipment and what kind of connection.

Considering the exceptional context of the pandemic and the consequences of school closures, the digital divide and, specifically, its "type of technology determinant" become relevant to the learning experience.

2.3 Learning Cultures

Within the social constructivist tradition, learning is a social process situated within and shaped by social and cultural contexts (Light & Fawns, 2001). This approach to learning challenges reductionist frameworks, which consider learning as something happening exclusively in the head of the individual (Light, 2006). As Lave and Wenger (1991, p.15) suggest, “learning is a process that takes place in a participation framework, not in an individual mind.” Moreover, as Bruner (1996, p.4 in James & Biesta 2007) argues, “learning and thinking are always situated in a cultural setting and always dependent on the utilization of cultural resources.”

Within this tradition of thought, Hodkinson, James, and Biesta (2007) propose a learning cultures framework. They consider learning as practical, embodied, and social and argue that “teaching and learning cannot be decontextualized from broader social, economic,

and political factors” (James et al., 2007). Under this framework, students' learning opportunities are shaped by many factors, dimensions, and influences (James et al., 2007).

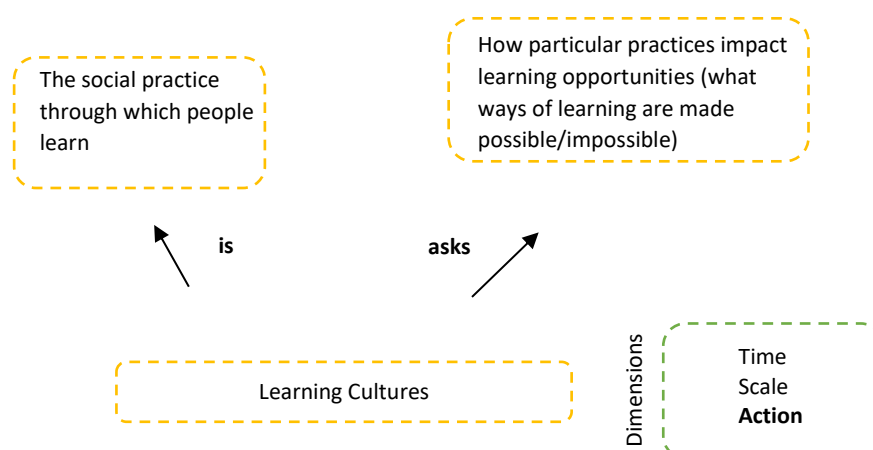
To begin the following discussion, it is important to define the word culture, or better, to provide the definition of culture adopted by the learning cultures framework. Hodkinson, James, and Biesta (2007) use the word *culture* in its anthropological sense as a way of acting and being, a way of life. Culture is produced and reproduced by human activity and, therefore, continues to exist as practice and has history and endurance (Hodkinson et.al., 2014). From this understanding of culture, a *learning culture* is considered the social practice through which people learn (James et al., 2007). Learning cultures exist through interaction and communication and are reproduced by individuals just as much as individuals are reproduced by learning cultures (James et al., 2007).

A learning culture is not the same as a learning site; instead, it is a way of understanding a learning site as a practice constituted by the participants' actions, dispositions, and interpretations over time (James et al., 2007). Within this framework, learning is considered a process more than an outcome.

According to Biesta (2011), Learning cultures have three dimensions: time, scale, and action. A learning culture can develop and change through time. Also, a learning culture can operate at different scales (policy level and classroom level, for example). Since learning cultures are made up of the actions of all those involved, it is vital to understand how learning happens through the actions of those who participate in the learning culture.

In summary, the aim of a learning culture approach is to understand how particular practices impact the learning opportunities of those who make up the practices (Biesta 2011, p. 202). The configuration of a particular learning culture will make certain types of learning possible and other types of learning impossible (James et al., 2007). This framework, therefore, gives two main criteria to consider within learning cultures: what do learning cultures allow vs. what do they disallow. Figure 2 offers a summary.

Figure 2 – Learning Cultures. Own elaboration based on Source James and Biesta 2007.



How does the digital divide combine with the cultural approach to learning? If learning is practical, embodied, and social, in the context of DE, the "type of technology" determinant and the type of connectivity will impact the action dimension. Thus, the configuration of the learning culture and what it allows or disallows will be affected.

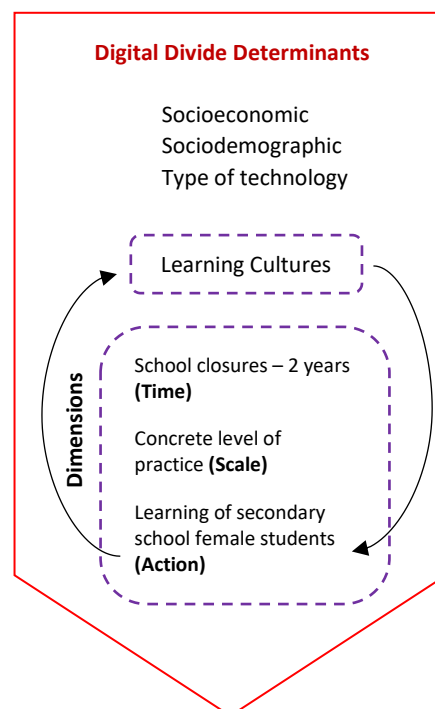
Access to technology for educational purposes in Peru differed greatly depending on context (as shown in Graph 1). The digital divide is undeniable; therefore, it is important to focus on the "type of technology" determinant. Similarly, the sociodemographic and socioeconomic determinants upon which our research is designed also impact the action dimension and the learning culture.

Dimensions of time and scale make research on learning cultures complicated, and Biesta (2011) has concluded that, for methodological and analytical purposes, the best way to study learning cultures is to follow the *action* (i.e., the learning) and from there, *zoom in* or *zoom-out* in time and scale.

Given the encompassing nature of learning cultures, the clarification mentioned by Biesta gives a piece of practical advice. In this research project, the action dimension (i.e., learning) was the starting point, zooming in on the time dimension (COVID-19 pandemic / 2 years) and scale dimension (the concrete level of practice of public secondary school female students in distance education).

Figure 3 shows how I will apply the learning culture framework taking into account the digital divide.

Figure 3 – The digital divide in a cultural approach to learning. Own elaboration based on Hodkinson et al. 2007 and Lytheatris et al. 2022.



To develop the analysis, it is necessary to zoom in on time and scale and understand the characteristics of the WhatsApp classroom. This considered, the first research question of descriptive nature is:

- (a) RQ1: What are the features/characteristics of the WhatsApp classroom in emergency contexts?

Exploring the configuration of the learning site will allow us to understand how the practices impact students' learning and help us answer our second research question.

- (b) RQ2: How is the WhatsApp learning culture expressed in the actions, emotions and learning of public secondary school female students from rural backgrounds? What does this learning culture allow or disallow?

3. Research Methodology

3.1 The need to choose a qualitative approach to research

The chosen methodology responds to the need to understand the uniqueness of personal experiences. Therefore, the research was conducted using a qualitative approach. Qualitative research focuses on studying the meaning and representations attributed to a problem shared by individuals or groups (Creswell, 2007). This approach makes it possible to understand social phenomena from the point of view of the individuals who are part of the study; that is, to understand the behaviour from the subject that performs it. Thus, this methodology allowed us to describe the particular ways in which informants understand an academic phenomenon (distance education) in a concrete reality.

According to Stake (1995), qualitative research has the following characteristics: it is comprehensive, empirical, interpretative, and empathic. It is comprehensive because it resists reductionism and tries not to be comparative. It is empirical because it is naturalistic and field-oriented; the intention is to delve into the information received by participants. It is interpretative because researchers rely on intuition and the research-subject interaction is part of the research. It is empathic because its design is emergent and responsive.

Following these guidelines, I developed a single case study using two primary sources: in-depth semi-structured interviews and focus groups conducted with a (quasi) participatory approach and emoji-elicitation techniques.

3.2 Researching youth

Throughout the years, research in the social sciences has moved from research *on* youth to research *with* youth (Weller, 2012). This implied a change in the positioning of youth, from being the object of research to being the subject of research (Coppock, 2010).

The interest in researching the experience of DE of secondary school students is twofold. On the one hand, they lived first-hand the experience of distance learning, which brings unique and specific insights (Milligan, 2016). On the other hand, and connected to their

direct experience, hearing youth voices is crucial, as the point of view of students on their own educational experience is seldom considered (Karlsson, 2001).

Within youth research, participatory and creative approaches are used by researchers to counteract the asymmetrical power relations between the participants of the study and the researcher (Weller, 2012). I will focus on this in the data collection sub-section.

3.3 Reflexivity and Ethical considerations

Inevitably, researchers will bring their worldviews, paradigms, and beliefs to the research project (Creswell, 2007). Thus, reflexivity becomes an integral part of the research process.

Through the research process, I had to deal with my positionality as an urban, non-indigenous woman from an upper-middle-class background. Also, even if I am Peruvian, the participants knew I was studying abroad, which took me further away from them, at least symbolically. I was positioned as an outsider. The silver lining was that students took much interest in how life is in other cities and countries, so we⁵ bonded a lot, talking and discussing different traditions, comparing Peru and Spain, for example.

Also, I doubled them in age, granting me a certain authority in their eyes; they called me teacher when referring to me and treated me by *usted*⁶ at the beginning. Since I had a previous relationship with the project manager of the boarding house these girls lived in, she introduced me, and by seeing the friendly and comfortable way we related to each other, the students were more open to getting to know me. With time and patience, they treated me as *tu* (informal), but I kept the tag of teacher or, at best, *señorita Ari*⁷. By the end of the fieldwork, however, we had developed a rapport, and many girls asked me to keep in touch through WhatsApp or Instagram. I do not think I was ever considered an insider, but I believe the rapport created during the weeks we spent together positively impacted the research project.

Ethical considerations must be made in any research project (Singer & Vinson, 2002). More so if the participants of the students are underage students. In this sense, both the host organization, the legal tutors, and the students who participated in the study gave their informed consent to participate in the research project. Informed consent with the students was an iterative process; I did not force any students to participate in the focus groups or interviews,

⁵ Whenever 'we' is used I refer to a process inclusive of me and them (the students)

⁶ Formal way of speaking in Spanish.

⁷ Miss Ari

and they could choose to discontinue the process if they wanted to. Pseudonyms have been used throughout to preserve anonymity⁸.

3.4 A (quasi) participatory approach

Participatory approaches to research have been widely used in youth studies (Weller, 2012; Milligan, 2016). A participatory approach prioritizes the direct involvement of informants in the research and the effective rescue of their perspectives (Grompone et al., 2018). Far from being treated as a mere source of information, youth are considered co-generators of knowledge (Fielding, 2001).

Therefore, participatory research is considered to yield a more morally aware and non-hierarchical research practice (Fuller & Kitchen, 2004 in Bagnoli & Clark, 2010). Moreover, according to Clark et al. (2009), participatory research allows a better understanding of complex situations and relationships.

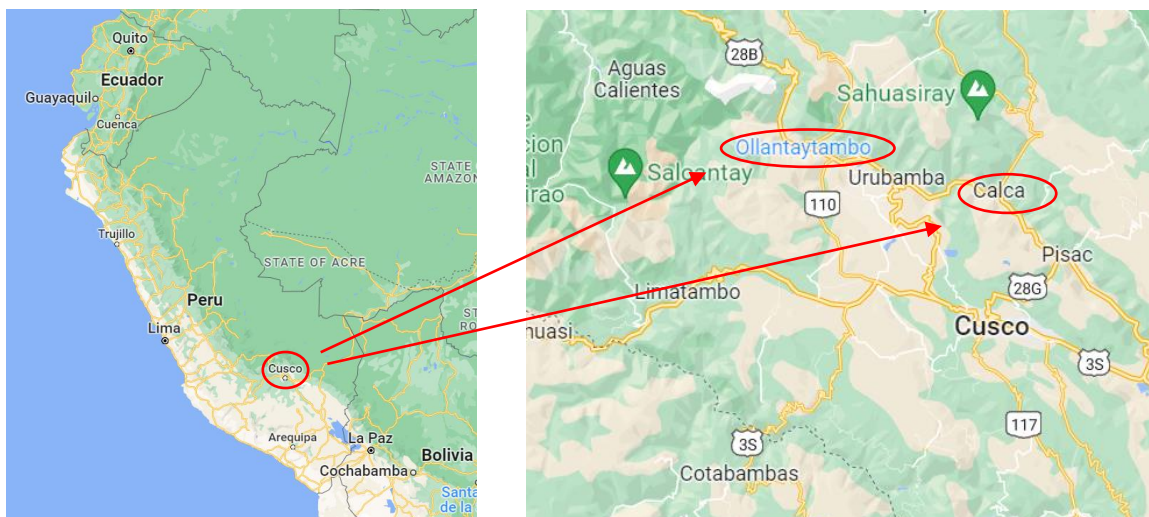
However, as Kindon et al. (2007) mention, what makes research participatory is the depth of involvement participants have throughout the process. In other words, a fully participatory approach would involve the students throughout the research process, including the research design and data analysis (Kington et al., 2007; Milligan, 2016). In this case, students were not involved in the design of the study nor in the data analysis. Nevertheless, the methods used were participative as they involved a shift in power dynamics where students actively participated and guided the data collection process (Milligan, 2016).

3.5 Approaching female secondary students from rural contexts

The fieldwork was carried out during October and November 2021 in two localities of the Sacred Valley (Calca and Ollantaytambo) in the region of Cusco in the southern Peruvian Andes.

⁸ The pseudonyms used are retrieved from a list of ‘most used names’ in Peru

Figure 4: Location of fieldwork. Own elaboration based on Google Maps. Retrieved April 6, 2022



I travelled from Barcelona to Lima and then from Lima to Cusco. Here I took a bus to reach Urubamba (the central town of the area), where I stayed for the duration of the fieldwork. I commuted to Ollantaytambo and Calca from there (Pictures of the localities can be found in Annexe 3).

Even if not as a researcher, I had already worked closely with students coming from rural communities in the Cusco region. From my experience working with female teenagers from rural communities, I knew they could be reluctant to share their experiences. Therefore, to build trust with the participants, I spent the first few weeks of the fieldwork bonding with them. I helped with homework, we braided our hair together, they showed me their favourite music, and we danced to it. This allowed for a more sincere interaction when the data collection process began (pictures of the overall experience can be found in Annexe 3). From the beginning, I was honest with them; I told them I was there because I wanted to learn more about how they had experienced distance education. Unfortunately, I do not speak Quechua, so all our conversations were held in Spanish.

At the time of the fieldwork, schools were still closed in Peru; therefore, accessing students through the school was impossible. Access was granted through an NGO working as a boarding house to allow female students from rural communities to access secondary education in Calca and Ollantaytambo⁹. I worked in partnership with this NGO from 2014 to 2016 and kept a close and friendly relationship with the project manager and members of the board of trustees.

⁹ In most rural communities in Perú there is only a primary school or a multigrade school (primary). To access secondary school students, need to travel to the nearest towns. This can be an access barrier, especially if you are a woman.

This boarding house was closed during the first lockdown (March 2020 – June 2020) and reopened in July 2020, allowing students to come back from their communities. This is of vital importance as these students and their families live in remote communities with no internet access and, in some cases, not even electricity. These students accessed learning mostly through broadcasting radio for the first four months of the 2020 school year. To get a 3G/4G signal and access the WhatsApp groups, they had to climb to the nearest mountain (sometimes three or even four hours walking).

3.6 Who makes up the study?

Conducting the fieldwork with secondary school female students from rural households and studying in small towns in the Andes situates the intersection between age, gender, urban/rural dimension, remoteness, education, and income. As I already mentioned, this specific population is already burdened with structural social and economic inequalities impacting the digital divide. Considering the above, as well as the close relationship with the NGO and the difficulty imposed by school closures, I opted for a purposeful sampling technique (Suri, 2011).

A total of $n=22$ female students from secondary schools participated in the study (Table 4). I sought to get to know the students' educational experiences; therefore, I delved into their personal interpretations (Vasilachis de Gialdino, 2006). An attempt was made to understand the situation from the voice of the individuals themselves.

The students participating in the research attended two different public secondary schools. Their age spanned from 12 to 18 years. Despite currently living in town, all the participants come from indigenous rural areas in the High Andes and are Quechua native speakers.

Table 4: Disaggregation by year group and location of the study participants. Own elaboration.

Locality	Year group					Total
	1 st	2 nd	3 rd	4 th	5 th	
Ollantaytambo	2	2	2	3	3	12
Calca	2	-	4	3	1	10
					<i>n</i>	22

3.7 Single case study

According to Yin (2003), a case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, making it suitable for research in education involving youth. However, case studies have been criticized for being of less value, impossible to generalize from, and biased by the researcher (Runeson & Host, 2009). Nevertheless, as Lee (1989 in Runeson and Host, 2009) suggests, knowledge is more than a statistical significance, and case studies provide an in-depth understanding of the studied phenomenon. According to Thomas (2011 in Starman, 2013), the case study is selected because it is interesting, unusual, and striking and not because it is representative. Our case study is near the extreme vulnerabilities students from rural backgrounds experience.

In this research, I followed the experience of a group of students attending two different schools. These schools belong to the same *Unidad de Gestion Educativa Local* (UGEL) which means they presumably received the same directives for continuing education during school closures. The UGEL actually provided teacher training to use WhatsApp for education purposes (UGEL 2020). Moreover, the participating students shared sociodemographic and socioeconomic characteristics and were all beneficiaries of the same project (they all lived in boarding houses managed by the same organisation). Considering these similarities, even if they attended two different schools, they have been considered one case study, and no comparisons have been made based on school or age.

Reflecting upon the considerations Yin (2003) makes when considering a case study design, the research project complies with the following characteristics: (a) the focus of the study is to answer “how” questions (b) the behaviour of those involved in the study cannot be manipulated by the researcher and (c) there is a need to cover contextual conditions as they are relevant to the phenomenon under study.

3.8 Methods for Data collection

To approach this case study, I used two primary sources: semi-structured in-depth interviews and participatory focus groups using an emoji-elicitation technique. I collected data in real time and directly from the participants. Miles and Huberman (1994) highlight that qualitative data collection should be carried out near the environment. Our data collection process was conducted *in situ*, allowing the needed time to develop trust with participants to communicate the true meaning of their experience.

3.8.1 Focus groups

Focus groups generate data through interaction and represent a collectivistic research method widely used in research with young people to explore emotional aspects of determined experiences (Bagnoli & Clark, 2010). Recommendations available in the literature (Krueger & Casey, 2000) emphasize that participants should share similar characteristics and know each other.

I chose focus groups to ease the data collection process, students felt more comfortable talking about this experience with their peers and supporting each other, so I decided to begin with focus groups so that everyone would feel comfortable sharing their experience.

I worked with groups of two to three students at the time. The focus group was divided into two parts and was organized per year group from (1st to 5th year) and locality; unless the year group had only one student, then she would be included in the group where she felt most comfortable.

The first part of the focus group focused on the participants' DE experience and had a descriptive aim. In this sense, I asked the participants to map out their DE experience. One question was asked at the beginning of the exercise (How does your school day start?). From there, students were free to explain their school day step-by-step. At this stage, students were given limited instructions to remind them to focus on what was important to them (Milligan, 2016). I was available throughout the process to answer any questions and to encourage them whenever they doubted themselves. Again, from my experience working with rural female teenagers, I could sense that they sometimes felt that what they had to share was not valuable. In fact, throughout the focus group process, some of them asked me if what they were doing was OK. I reassured them by saying they were the experts in this matter as it was their experience.

Once this first exercise was finished, I asked the students how they felt through every moment of their school day (of the moments they had explained). To do this, I used an emoji-elicitation technique. Once all the students participating in the focus groups had placed their emojis in each moment of their school day, we began a group conversation in which I asked questions like, "Why did you put this emoji here?" From there, the conversation flowed, and sometimes participants would chip into the conversation a particular student was leading to say I feel like this as well, or this happens to me too (An example of the focus groups can be found in Annexe 2).




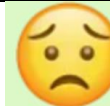
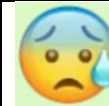
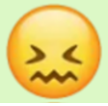
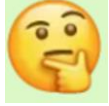

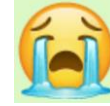
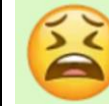
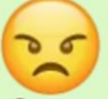



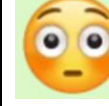
3.8.2 Emoji-elicitation techniques

Visual research methods are consistently used in youth research (Fane, 2017). Moreover, visual methods are considered to be highly participative, making them a suitable method for research with youth (Fane et al., 2018).






An emoji is a graphic symbol expressing ideas used in mobile communication and social media (Novak et al., 2015). Emojis can be used to represent facial expressions and have been widely used also to represent feelings and gestures (Novak et al., 2015). In order to use the emojis with the participants, they were enlarged, printed out in colour, and laminated. After the participants completed their step-by-step school day in the A3 paper that was provided, all the available emojis were placed in the middle of the table facing upwards. Here, the instruction was to choose whichever emoji represented the feeling in every particular moment of the day. Table 5 shows the emojis available to choose from.

As a researcher, I had assumed the meaning of emojis was relatively straightforward; however, during this process, I realised that perhaps it was not. Upon seeing an emoji, some students would ask me, “What does this mean?”¹⁰ I was quite surprised at this, and to avoid influencing their answers, I responded with another question “What does it mean to you?” Fortunately, I had been given permission to record (audio) all the focus groups and interviews, which allowed me to focus on the process and to take just a few notes highlighting what I was observing, like this questioning of the meaning of the emoji. I had not categorized the emojis to give freedom to the students to choose the emoji that better reflected how they felt instead of choosing from a predetermined categorization of “happy,” “sad,” “angry,” etc.

Table 5. Emojis used during the focus groups. Own elaboration based on WhatsApp 2021.

Emojis used				
				
				
				

¹⁰ I believe this is a clear example of how the digital divide shapes the becoming of the digital native. And the fact that there were doubts on the meaning of emojis also demonstrates that equalizing youth to the archetype of the “digital native” is more than a faux pas.

Emojis used				
				

I resorted to emojis as a visual-elicitation technique to prompt discussion. I thought that directly asking the students, “How did you feel?” could be a bit invasive and create resistance. Instead, with the emojis, they could silently choose the one that better represented their feelings at a certain time during their day. Once the emojis were placed on the A3 paper, I began asking questions related to the emoji itself, like “How come you chose this emoji here?” By doing this, I avoided asking them how they felt directly, but indirectly they would tell me the feeling under the emoji they had chosen.

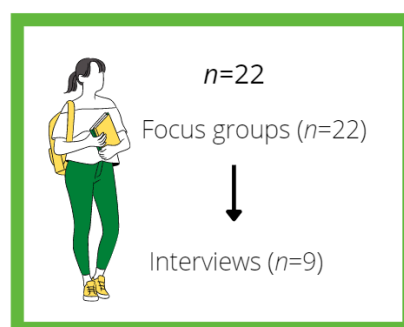
3.8.3 Interviews

The in-depth semi-structured interviews were adjusted throughout the process to capture the new reflexivities that appeared during their application (Guber, 2005) and to allow for serendipitous moments throughout the interview process. The interview questions were designed as open questions (a complete list can be found in Annexe 1). Open questions were the best choice for this project as they allowed a broad range of answers and issues to arise from the interviewed subject (Robson 2002 in Runeson & Host, 2009).

A voluntary-based interview process was chosen to respect participants' will and avoid falling into a research/participant power dynamic. The interviews were conducted with nine secondary school students from the 3rd, 4th, and 5th years.

After the focus groups were done, I asked the participants if they wanted to participate further in the study. From our original sample ($n=22$), only $n=9$ students agreed to participate in the in-depth interviews. Coincidentally these students were the oldest ones (3rd, 4th and 5th form).

Figure 5. Participants per qualitative method



Source: Own elaboration

I chose to apply open-ended interviews to go more in-depth into the experience of the students, to be able to record a perhaps more personal and nuanced point of view of the experience. The focus groups were great for inviting conversation and participation with peers; the interviews added a more detailed layer to the data collection. In many cases, the open-ended questions were complemented with *Why?* questions giving space for more reflection and, therefore, a more in-depth explanation of the experience itself.

3.9 Data Analysis

All the interviews and focus groups were recorded (audio) and transcribed on the same day they occurred. This complemented the transcription with that day's field notes and sensations. Coding was done line by line using these transcriptions. Atlas.ti software was used to aid the process.

The first coding phase was done inductively using the informant's own words (Chesler, 1987 in Eaves, 2001). These initial codes were then grouped into broad categories highlighting the students' actions, emotions, communication, and participation. As a researcher, I tried not to impose my own meaning on the categorization process. Therefore, categorization was based on what the students themselves were saying. Everything related to *communication* was categorized as such; what was *emotion* was categorized as emotion, and so on. A second, more detailed categorization also considered whether the experience within each category was positive or negative. Again, categorization was done based on what the students said during the interview. The second coding phase was done deductively, focusing on the "type of technology" (digital divide) and the criteria proposed by learning cultures focusing on what was being allowed or disallowed.

Once these codification and categorization process was done, I used the co-occurrence table option available in the software to visualize the co-occurrence between "type of technology," the allow/disallow dimensions of learning cultures, and the categories put forward by the inductive coding.

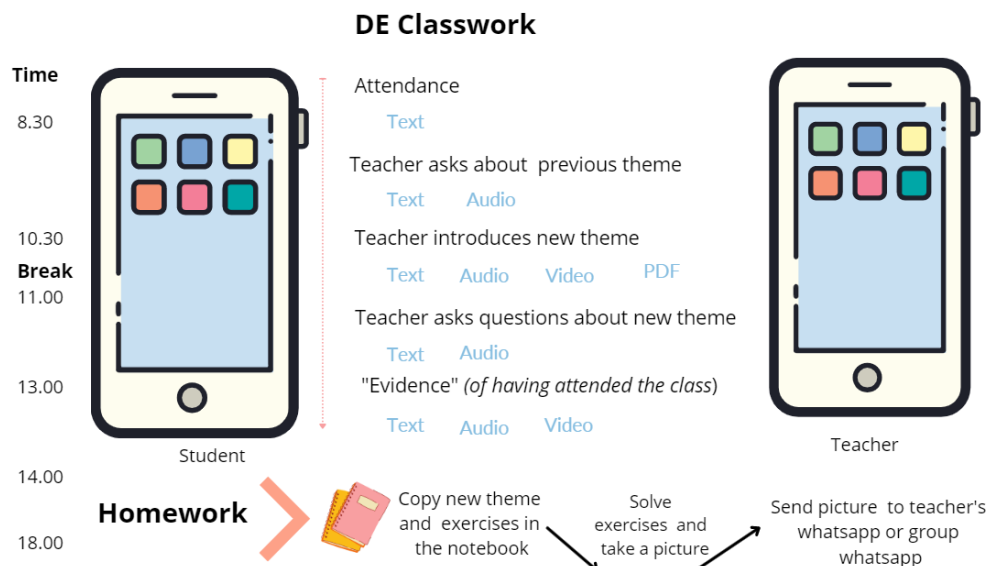
4. Findings

The following section will begin presenting the findings related to the features of the WhatsApp classroom (RQ1). Then, the findings related to the learning culture of the WhatsApp classroom (RQ2) will be explained. Discussions will follow.

4.1 The WhatsApp Classroom

So, how was a class organized through WhatsApp? What were the characteristics and features of the WhatsApp classroom? Figure 6 represents the WhatsApp classroom secondary school female students from Calca and Ollantaytambo experienced throughout school closures.

Figure 6 – Distance Education learning site. Own elaboration based on the data collected in the focus groups



The following description is a summary of the different experiences of the students. All participants were enrolled in formal secondary public education. Interviewees attended two different institutions, one in Calca and one in Ollantaytambo, from form 1st through form 5th.

Class began in the same way for everyone, through a connection to a WhatsApp group. Students went online using a Wi-Fi connection and, when lacking that, used a 3G/4G connection and had to register attendance. Once the attendance process was finished, the teacher

would ask questions about the theme studied the day before (through text or audio). Here, the students had the possibility/implicit demand to answer the questions (through text or audio). Participation at this moment was crucial to be considered present. After a quick break, the teacher, through either audio, text, video, or PDF, introduced the new theme and then continued to ask questions regarding the subject. Again, this moment was considered "evidence" of having attended the class; therefore, students were required to participate. Lessons finished at 1 pm, and the afternoon was devoted to homework.

Interestingly, the students developed their homework with pens and notebooks. They copied the theme taught that day from their phone to their notebook, or if they received a PDF, they copied it on the notebook - only sometimes could they print them. Then, they solved the exercises with the help of their peers, and they took a picture of the homework in their notebooks before sending it to the teacher as proof. Homework was sent either to the private WhatsApp number of the teacher or to the class group. Moreover, it had to be sent in a set amount of time determined by the teacher for it to be valid.

Independently of the school, one group of students worked with one WhatsApp group for all the subjects. This meant that as soon as the period changed, the class would be done, and another teacher would get hold of the WhatsApp chat with his or her subject. This also meant all the content for all the subjects for the class was in one WhatsApp group. Bear in mind WhatsApp has a linear format which makes it easy to *lose* messages, especially in a group interaction.

Another group of students, instead, had one WhatsApp group per subject, managed by the teacher of the subject and active only during class hours. They all had parallel groups on the same platform for homework and social purposes.

The description of the school day above is similar for everybody. Some teachers sent more texts than audio, others preferred PDFs, and others would use a mix of audio, text, and video. In any case, the students were never asked what communication medium they preferred, but all were exposed to all mediums (text, audio, videos, PDFs) at some point or another. From our interviews, it appears that students preferred audio and videos over text and PDF because "the audio is easier because you can listen, when they send a text it is long and hard to read" (Magaly & Raysa). Also, "when the teacher sends an audio, you can listen to it again" (Illari & Yuriana).

The requirement of the *evidence* of having attended the class was the same for everyone, as was the homework process. Within the student groups, most classes were handled this way. Only art and religion, were held, in some cases, through other platforms such as Zoom or Google Meets (from now on Meets).

It is important to remember that none of these students had a mobile phone before the pandemic. As Elisa recalls, "before distance learning, I did not know how to use WhatsApp, I did not even have a phone, now I have more of a relationship with technology." Once again, this undermines the assumption of the digital native and highlights the depth of the digital divide as a structural factor impacting the learning culture.

Similarly, the platform was selected to accommodate all students in the classroom. At first, some teachers thought of delivering classes through Meets. When they did, they noticed only a handful of students were present and discovered most students could not access that platform (Yeli & Yuriana), either because of data usage, mobile phone speed, or internal storage availability for running the app¹¹. The teachers then switched platforms, choosing WhatsApp because of its accessibility (remember, WhatsApp does not use your data in Peru). Evidently, the quality of the mobile phone, and the type of connectivity, disables certain platforms while enabling others. As the theoretical underpinnings of learning cultures emphasize, social practices are an outcome of individual actions and broader structural factors (James & Biesta, 2007). In this case, the digital divide is one of these structural factors.

Some students mentioned they needed to delete applications like Duolingo, where they practiced English, because they needed internal storage to store the audio and videos teachers sent through WhatsApp. In some cases, they had to delete information to make space, and the deleted information was lost due to the lack of backing it up on another device. At times, when students were required to connect through Zoom or Meets, the sessions logged out as the phone was unable to support the app.

Sometimes, there was no Wi-Fi or 3G/4G available, meaning the student could simply not access class. This highlights the fact that if you owned a low-memory device, the price for connecting and being present in the WhatsApp classroom was to prioritise certain apps over others. This goes to the detriment of learning other things (for example, through Duolingo) or even having moments of idleness through other apps.

The described WhatsApp school day was repeated during school closures (2 years), creating a singular learning culture highly mediated by WhatsApp but still rooted in a traditional setting.

¹¹ A quick technical note. While WhatsApp was designed for mobile users, Google classroom caters to desktop or laptop users. To use Google classroom on mobile phones, the user has to download four applications (classroom, google docs, sheets, and slides). Downloading applications is data and memory-intensive making WhatsApp super accessible especially in remote areas (Dhillon 2020).

4.2 Students in the WhatsApp Classroom

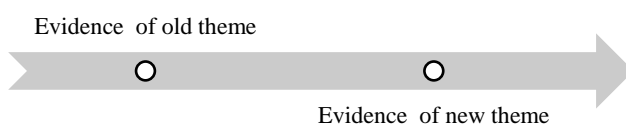
During the WhatsApp school day, there were moments that required students' action and active participation. Considering that the purpose of the study is to understand the WhatsApp learning culture as a practice constituted by participants' actions (James and Biesta, 2007), the way this group of secondary school students learnt in this learning culture will now be presented.

For clarity purposes, I have separated actions, emotions, and learning in different sections. However, it is important to mention that these categories feed into each other.

4.2.1 *It is not dynamic at all*¹² - Action of students

Within the WhatsApp distance learning classes, the students participated relatively passively. The active participation required by the students came in two moments (see Figure 7). After the teacher asked questions on the subject studied the day before; and after, he or she asked questions on the new subject.

Figure 7 – Moments the student was required to be active during the school day. Own elaboration



A few students took their notebooks, read, and copied the answers on WhatsApp, while others copied the question the teacher sent, opened Google, pasted it in the search bar, opened the first or second tab, and copied the answer to the chat. These questions were provided during class time, and an answer was expected during the same class (1 hour/1.30 hours). This configuration of approaching learning will disallow certain things, as will be discussed.

Seemingly, there was no real space for the students to ask questions to the teacher. The teacher always posed the questions, and since the teacher logged out from the group at the end of the class, there was no time left for students to ask questions. As will be discussed, this organization of time and virtual space will disable some actions within the WhatsApp classroom.

¹² The subtitles in this section are direct quotes from the interviews or focus groups with the students

After lunch and until about 6 pm, students did their homework. They got homework for every class and had a set date and time to send it to the teacher for it to be considered valid. The homework went on traditionally, using notebooks, pens, and paper. Students would copy all the lessons from the subjects of that day into their notebooks and solve the exercises.

Homework rose exponentially. Students recalled not receiving as much homework when they went to school, and sometimes, they could even finish it during class hours. During school closures, they spent most of their afternoons completing homework like the following testimonies show: “In in-presence school they didn’t leave us much homework, now they give me a lot of homework, for every subject” (Illari) or “I don’t like doing homework. Because now they leave so much homework. It wasn’t like this before, in in-presence class” (Yeli).

Homework was mainly done per year group and, since it had increased exponentially, many students resorted to share homework, for example: one student would solve the maths exercise and the other the Spanish homework and then they would share the answers. Google was used to find answers to homework related questions as well.

4.2.2 If they laugh, they laugh at home, you will never know - Communication of students

Communication is a key ingredient in the learning process (Watzlavick et al., 1991), and it is interesting to see how the WhatsApp platform encouraged and allowed communication. Before delving into this aspect, it is important to give some detail about the prior experience of these students in a classroom setting. This is important because it will give us an idea of their disposition towards communication and how it changed.

As I mentioned in the methodology, these students are all female, come from rural indigenous communities, and their mother tongue is Quechua. Neo-colonialism is still very much present in Peru; indigenous populations are highly marginalized, and racism is rampant throughout society (Grompone et al., 2018). This, of course, translated into the school experience as well. Most students suffered racism in school by their peers and by teachers as well, in some cases.

In fact, most students faced intense emotions when their participation was needed in the classroom. Yeli said that "every time I went to school, I had the sensation I was facing a war." Raysa mentioned,

In distance learning, you can participate with audio and text, and nobody will say anything, but when you are in the classroom, and you get confused when answering, they will mock you (...) when you participate in class, everyone looks at you, and you get very nervous and blush.

Katia's experience is similar as she mentioned she fears going to class and especially communicating. Interestingly, they all mentioned that WhatsApp enabled them to communicate more with peers and teachers as they were no longer afraid of mocking or laughing.

Katia and Raysa mention that "my classmates do not look at me (through WhatsApp), so I participate more." A group of three students stated, "we participate more now because when you are in the classroom, you get shy with your classmates, but on WhatsApp, you can write normally" (Gianela, Magaly and Marisol). Melisa mentioned:

You can express yourself in a more fluid way and without the fear that your classmates will laugh...well if they laugh, you will not listen to them because they laugh at home, you will never know.

And Yeli, who thinks "it is better to work through WhatsApp because you can express yourself more," even improved her oral expression grades.

This perceived ability of improved participation and expression contrasts with the opinion that there was never time to ask questions to the teacher. In this sense, participants recalled that during in-presence class, they would approach the teacher between periods when he or she was alone in the classroom and ask questions or look for him or her in the hallway and, like this, solve their doubts. In this new configuration, the physical co-presence – as Biesta (2022) names it – no longer exists.

The fact that the class was organized based on sending evidence and that the teacher logged out as soon as the period ended disabled the space for students to ask questions. As they said:

On WhatsApp, you ask questions, and the teacher will not reply for five or more minutes, and the class keeps going. Also, sometimes your questions get lost on the WhatsApp chat (Katia).

4.2.3 It is boring, and it is not dynamic at all - Emotion of students

It is impossible to detach the emotion from the action as they feed into each other (Abramowski, 2017). Therefore, the emotions related to the actions mentioned above and to the overall learning experience will be addressed.

Students were generally sleepy, tired, and bored during the distance learning experience through WhatsApp. Gianela mentioned the following "at the beginning of the class, you are very eager to learn, but then *las ganas bajan* (I don't feel like it anymore) it feels heavy always to be connected on WhatsApp," a feeling described by Sami as well. Others mentioned that they get easily distracted and "get out of class" – meaning out of the WhatsApp group (Yanay, Magaly and Haylli). Yuriana stated, "through WhatsApp, I feel alone and sleepy."

Apparently, in the configuration of the WhatsApp classroom, learning became performative. The students were considered present if the teacher saw their evidence. To obtain this evidence, the teacher would ask questions – expecting answers – and this interaction triggered different reactions and attached emotions.

Yeli mentioned that teachers sent many questions at once, at least 5, and they expected an answer. If the hour of the class ended and the student had not sent any evidence, she could not send it anymore, meaning she got a zero for participation (ie: according to the teacher, she had not attended the class). This process was considered "hasty and a bit stressful" (Yeli).

Given that all the students answered through text or audio, it happened that the teacher did not see some participation and gave a grade of "0". As Elisa said:

Sometimes teachers do not take my intervention into account because there are many interventions, and they do not see all of them inside the group.

This generated anger and frustration in the students (Raysa, Katia, Elisa, Yeli).

Students approached the questions of their teachers in two different ways. A handful of them (3) took their notebooks, looked for the answers, and then copied them to WhatsApp. Most of them, however, took the question and directly copied it to Google Search. Once an answer was produced, they would copy it and paste it into the WhatsApp chat. As one of the students mentioned, it was easier to participate in this modality because "you search in *Saint Google* paste and have a 20/20" (Marisol).

This clashed with the attitude of the other group of students, who believed that

Distance learning is better for the more relaxed students, now they get the same grades as the students that worked hard in the classroom because all they do is copy and paste from Google" (Elisa & Yeli).

Interestingly, the students who did not copy from Google were the oldest; they all identified as good students, had the best averages in their class, and were looking forward to participating in scholarship applications to access higher education. Not only they wanted to learn, but they needed to learn to continue their path in the education system. Elisa and Yeli were part of this group. Elisa stated that

This is what happens, and I get mad because it is unfair there are people that are sacrificing so much and others that do not do anything, just copy paste.

Yeli also shared her reflections on the subject:

Students want things easy; they do not research or analyse; they search in Google and get an answer; who knows if they understand the words or not? And to be honest, I do that too sometimes, but I know it is wrong because I do not learn (Yeli).

The above is perceived by hardworking students as unfair and impacts their motivation toward school practice. Also, the amount of homework the students are undertaking in this configuration can be quite stressful as Raysa's testimony shows:

I feel stressed because for each subject they send you, one or even two PDFs and you have to send them back (to the teacher) that same week, so much homework.

At times, students were asked to develop homework in video format; this presented a challenge for them as they felt embarrassed to send videos of themselves in the group chat as the following testimony shows

Sometimes we need to send videos as evidence, and I don't like to send videos (Why?¹³) Because *no me gusta que me vean* (I don't like to be seen) (Yeli).

The lack of direct communication with the teacher is a source of distress as Yeli stated, "you cannot communicate with the teacher directly, sometimes they do not answer your questions," and she described the whole process as "it is boring, questions and answers, questions and answers, and it is not dynamic at all." This mental image can introduce the overall learning experience of the WhatsApp classroom.

4.2.4 Saint Google and the miracle of instant learning - Learning of students

Overall, the general perceptions of having classes through WhatsApp focused on the limitations of the application in terms of learning and teaching. When asked how much they were learning with classes through WhatsApp, most students replied, "not much." In fact, the interaction through WhatsApp was not perceived as a class, as the following testimonies show: "In distance learning, they don't teach us; they send us homework" (Magaly); "In distance learning, they don't explain things well, they just send us *fichas*, and we have to develop them by ourselves" (Maria).

There is also a generalized feeling that the content is not well explained. Flor mentioned, "On WhatsApp, they don't explain things well. I don't understand how to do my homework" and Claudia stated "It's much harder to understand the teacher through WhatsApp, especially maths". Regarding maths, Raysa mentioned:

When maths begins, I don't understand anything, and the teacher is there and I don't understand. And he says one thing and then another and I almost want to cry.

¹³ This is my question to go deeper into what Yeli was mentioning.

The availability of Google and the internet is seen as positive and negative. Students were very aware of how using Google impacted their learning. As Andrea mentioned, “on WhatsApp, we search on *Saint Google*, and we don’t learn much,” or as Yeli, one of the high achieving students, stated:

I learn more from books, I feel more satisfied because I can learn something more and I can remember, instead, in Google it’s momentaneous, I copy on my notebook and then *se me pasa* (I forget).

Elisa shared a similar experience:

My learning is not the same. I feel I learnt more in the classroom with the interaction between students and teachers; like that, you learnt in one way or another. Now I feel learning is instantaneous, I can learn something today, but after a week, I already forgot everything I learnt.

Students resort to Google because the configuration of time and space in the WhatsApp classroom impacts the possibility of asking questions to the teacher, either during class or afterwards, for the homework process. As Yeli mentioned:

It is not the same anymore; at school, you could easily understand the teacher...that this plus this is that, and you use this formula for this exercise. Now it is not the same, sometimes, you get confused, and you do not know how to ask the teacher, your questions get lost in the group, and the class moves on. It is the disadvantage of distance learning.

Or the testimony of Katia:

Sometimes at school, teachers explained better and when you went to recess and the teacher was alone in the classroom you could ask him what you didn’t understand, and he would explain.

Similarly, during the homework process, students cannot ask their teachers questions as Raysa stated:

In class, the teacher would explain how you were supposed to do your homework, but not now. Now you have to understand everything in class *nomás*¹⁴, how you are going to do your homework. Everything.

For Claudia the experience is the same

When we have questions about the homework, it is hard, the teacher does not answer (on the WhatsApp group¹⁵) until very late in the afternoon or the day after, and we don’t know how to do our homework.

To be able to answer the questions they don’t understand, the students resort primarily to Google, as the following statements show:

¹⁴ Colloquial way of saying that, in this context emphasizes that all had to be understood in class.

¹⁵ My clarification

“When you don’t understand or you don’t know, you can search the answers in Google” (Yeli); “The questions I don’t understand, *del Google salen las respuestas* (the answers come from Google)” (Raquel)

As well as comparing their learning through WhatsApp to their learning in the classroom students also compared it to their learning through other platforms, specifically Meets or Zoom. Besides three students who did everything through WhatsApp, the others used Zoom or Meets, with the already mentioned difficulties, for art and religion classes.

The synchronous interaction between actors (peers and teachers) on Meets seems to aid interactionism and enhance learning. Take Raquels’ testimony “On WhatsApp, they only send you *fichas*, the teacher doesn’t answer quickly but on Meets they do” or Samis’ statement:

I prefer classes on Meets because the teacher explains more and when students ask questions he gives more examples, and from that, we also learn. But we only have art on Meets (Sami).

The possibility of seeing the teacher was also considered a positive element:

I like classes on Meets more, on WhatsApp they only send texts or audio but on Meets the teacher speaks, she turns on her camera. It feels different (Karol).

Some students felt more focused on Meets: Yuriana said, “On Meets, I do pay attention, we talk, and you feel you are with other people, you do not feel sleepy or lonely.”

Illari’s experience provides an interesting observation.

On Meets, I have to pay attention because the teacher asks us by name, in that moment we have to say what we understood. Instead, on WhatsApp, she asks the whole group. And through Meets, I need to answer because if I don’t, my classmates will laugh.

WhatsApp-mediated communication felt safer for all the students, and as it transpired through their testimonies, they could express themselves better. However, once the class migrated to Meets the negative experience associated with participation in the classroom lighted up when there was a camera involved. Haylli cringed at having to turn her camera on mandatorily. Yeli mentioned she did not like Meets because “the teacher makes me turn on my camera, and I don’t like that.” Even if Meets allowed for more interaction between teachers and students and enhanced comprehension, turning on the camera was something students were not comfortable with.

5. Discussion

So, what does the specific learning culture of a WhatsApp classroom in vulnerable settings and for female secondary students allow and disallow?

Firstly, compared to other platforms (Meets, Zoom), it allows retention of students with no other means to connect to the classroom, emphasizing the importance of the “type of technology” determinant of the digital divide. A WhatsApp classroom will surely aid in achieving the goal of retention if that is the priority. Secondly, it allows an increase in communication. Students feel freer from the barriers that exist in the physical classroom. They are not afraid of being seen in a WhatsApp group, and they feel safer and more at ease communicating when they do not fear the judgment of others.

What does it disallow? The configuration of the class as a question/answer format disallowed the significant learning of subjects. Learning becomes performative by just providing evidence of having attended.

The configuration of time and space in the WhatsApp classroom disallowed interactionism between actors (peers and teachers) and the possibility of asking questions to the teacher at an appropriate time. This lack of access to the teacher along with the accessibility of search engines through the mobile phone and the amount of *evidence* needed to prove assistance made students resort to Google to answer the questions. In itself, I do not think this is negative. I use Google all the time to find information. However, in this specific case, relying on Google instead of the teacher for explanations disallowed the in-depth comprehension of the subject and retention of concepts. Given the amount of homework received per subject and the unavailability of the teacher, after the period ended, the Googling praxis and homework sharing were quite common, reinforcing learning at a surface level.

Furthermore, the copy/paste praxis encouraged by this configuration impacted the high achieving students' motivation towards their learning as they lost motivation by seeing that copy/pasted answers were given the same grades as their answers. Table 6 summarizes what a WhatsApp learning culture allows and disallows in this context.

Table 6 – Summary of what a WhatsApp Learning Culture allows or disallows. Own elaboration.

WhatsApp Learning culture	
It allows	<p>The retention of students that have no other means of connecting.</p> <p>For increased communication of students in the classroom.</p> <p>Students to feel safer</p> <p>A copy/paste praxis</p>
It disallows	<p>Interactionism in the teaching of subjects making significant learning complicated, especially in subjects like maths.</p> <p>Time and space to ask questions, leaving unsolved doubts.</p> <p>By promoting copy/paste from Google, it disallows retention of information and an in-depth understanding of the subject.</p> <p>By promoting copy/paste from Google, it also disallows motivation in high achieving students</p>

Coming into the research and grasping these students' context and background, I genuinely expected they could not wait to return to school. However, and besides the difficulties attached to distance learning in this context, the students also found that distance learning “makes our lives easier” (Yeli). They even proposed a hybrid learning modality as their go-to education choice.

This is directly connected to the structural inequalities these students face when attending a traditional school. Firstly, they commute¹⁶ to secondary school (30 min to 1 hour, depending on the school), meaning they wake up early every morning. The students walk to school, and their shoes get muddy, especially in the rainy season. School policies require students to wear a clean uniform every day, meaning the girls must clean their shoes every evening¹⁷. Moreover, they do not have many pairs of blouses and skirts making up their uniform, implying they also spend time washing their clothes in their afternoons. In the WhatsApp classroom, students do not need to commute to school; however, the ownership of devices and access to data becomes indispensable (Martinez and Saxena, 2020).

In the previous section, I discussed the communication dispositions of these students prior to the WhatsApp classroom and how going to school “felt like going to a war” (Yeli). These testimonies bring to the table reflections about the damaging potential of schooling. Some aspects of schooling can be easily connected to violence, like bullying and punishment (Harber, 2004 in Francis & Mills, 2012). However, the more useful thing to reflect on is the reproduction of inequalities within the schooling system (Francis & Mills, 2012). This, of course, is not a novel practice and has been discussed widely in the literature. The configuration of the WhatsApp learning culture can also be linked to practices that reinforce schooling as damaging organisations. Only one student reported this kind of praxis, which is important to take into account as well:

I am afraid of my teachers, and I am shy. They are very strict. When you don't participate, they take you out of the group, they delete you. Some of my classmates have been deleted from the group (Andrea).

Therefore, it is important to be very aware that dynamics perpetuating inequalities can be translated to digital spaces as well. As Selwyn (2004, p. 357) noted more than a decade ago, “to imagine a digital world free from the inequalities of the offline world is again indicative of technological naivety rather than foresight.”

The focus of my research was to understand the configuration of the WhatsApp classroom and its learning culture expressed through students' emotions, actions, and learning to point out what this learning culture could allow or disallow. Throughout the fieldwork experience, it emerged that what the students valued the most about the WhatsApp classroom was that they were no longer finger-pointed, singled out, or laughed at. They felt much safer in the WhatsApp classroom to communicate and express themselves. Under social justice

¹⁶ This is the commute from Calca or Ollantaytambo to their schools not from their communities (8 or 10 hours away walking)

¹⁷ They have one pair of shoes

frameworks, creating a safe space for students from different ethnic backgrounds is important for education (Brown, 2015).

It could be argued that the WhatsApp learning culture creates an environment where other students stop seeing some of the differences they would generally point out and laugh at, thus creating a safe space for marginalised students to learn. Perhaps the WhatsApp classroom, which involves no videos or cameras, could help overcome prejudice and create a safe space for learning. However, is this an equalising process or an invisibilising one?

It could also be argued that students felt more comfortable and safer in the WhatsApp classroom because it made them invisible. This, however, presents a problem as, besides the dimension of qualification education, also provides for socialisation and, more crucially for subjectification (Biesta 2020). If subjectivities are also built in the learning process, learning cannot come at the cost of being invisible. How can I become a subject of my own life if I am invisible? The school, whatever format it might take, cannot be a place that promotes invisibility. Schools should be a safe place regardless of where they are located, if it is a physical space or a digital one. What kind of schools do we want to have and promote beyond the formats? As Biesta (2019) argues, the concern for subjectification is important not only for the sanity of students themselves but also for the construction of a democratic society.

5.1 Beyond the walls of the WhatsApp classroom

Recalling the experience of the students and their testimonies, the assumption of the digital native loses validity. This, however, does not mean that there is no interest in technology, digital devices and what might stem from them. The following reflection will touch upon this.

This research did not aim to determine students' learning outcomes; I was not interested in grades but rather in their learning experience and how it changed in the WhatsApp learning culture. Through the fieldwork and outside the realm of the interviews and focus groups, these girls shared experiences with me that made me reflect more broadly about *learning*.

I will touch upon this very briefly as I understand it was not the purpose of the research and will therefore not answer any questions but, instead, raise new ones. These girls used platforms like TikTok and Google Translate to learn Korean because they were complete fans of the KPOP band BTS¹⁸. They liked the band because of their lyrics, which was not straightforward to me as they either sing in Korean or in English, and these students only speak Quechua and Spanish. I was taken completely aback by this serendipitous discovery and wondered how they understood the lyrics they liked so much. They told me they used Google

¹⁸ BTS is a very famous KPOP (korean pop) band.

Translate to understand them and practiced Korean on TikTok. So, were these students learning? According to the learning culture configuration of the WhatsApp classroom, they were not learning much, at least not school-related content. Nevertheless, does this mean they were not learning? No. They did learn! They learnt many things – beyond formal education – using the platforms, devices, and connectivity available to them. They showed me the textbooks where they practiced Korean and taught me how to say *Hello*, and *I love you*. They were also making videos with KPOP songs and pictures, demonstrating they were becoming producers of knowledge and not just consumers.

These students own a device that, despite the technology limitations, is not limited to WhatsApp. For different reasons (availability, accessibility, and low-tech), WhatsApp has been used as the main pedagogical tool. Questions related to what applications the students use and with what purpose they use them are important as they could give a glimpse of how to better reach them. Perhaps, if harnessed correctly, mobile phone technology could indeed support distance education in some contexts.

6. Conclusions

The Covid-19 pandemic has highlighted and increased existing inequalities throughout our societies, including education inequalities. This situation disproportionately affected the most vulnerable students, especially in the Global South.

Framed by the situation created by the Covid-19 pandemic, this research project tried to answer the following research questions.

- (a) RQ1: What are the features/characteristics of the WhatsApp classroom in emergency contexts?
- (b) RQ2: How is the learning culture of the WhatsApp classroom expressed in the actions, emotions, and learning of public secondary school female students from rural backgrounds? What does this learning culture allow or disallow?

A learning cultures approach and the digital divide framework, specifically the type of technology determinant, were used to frame the analysis. First, a description of the WhatsApp classroom and its features and characteristics was developed. This allowed the exploration of the female students' actions, emotions, and learning. With these elements, what the WhatsApp learning culture allowed and disallowed was mapped out.

In answering the questions, it has been clear that technologies are not neutral. They enable some things, in this case, retention, an increase in communication, the possibility of safe communication, and a copy/paste praxis, while they disable others, like interactionism between teachers and students, which limits the comprehension of the school subjects. Therefore, it is vital to analyse the possibilities and limitations of different educational technologies (Biesta, 2020) especially to address the inequalities that could stem from these configurations. Moreover, the findings also showed it is wrong to assume all youth to be digitally native and therefore at ease with technologies.

The 'physical co-presence' – like Biesta (2022) names it – of the classroom has been replaced by platform-based spaces created by digital devices and Internet connectivity (Martinez & Saxena, 2021). This deconstruction of physical places has led to the construction of digital environments, where classrooms have become “spaces anchored in the idea of coming

together to learn on digital platforms” (Martinez and Saxena, 2021, space divide section); in this case, WhatsApp. The digital divide in education can therefore be read also as a *space divide*, where there is unequal access to digital spaces delivering education. Here the “type of technology” becomes determinant and underlines the fact that it is not dichotomic. It is not a situation of whether I have access or not, but it is related to what type of access I have.

As it has been portrayed through the findings and discussion, the type of technology will impact the student action and, consequently, the WhatsApp learning culture, which will reinforce certain praxis impacting the student action again.

All learners deserve a quality education and training that provides them with opportunities for lifelong learning, the world of work, and meaningful participation in society (Moodley 2002), especially in these everchanging and challenging times. Given the current pandemic, DE has become essential to the continuity of education, yet DE tools are still too rarely accessible or inclusive.

Especially in the context of the Global South (GS), where there are structural issues related to access to connectivity, unreliable networks, ICTs, and digital literacies (Heredia et al., 2019), DE must be inclusive of all students and find different solutions to ensure learning and education continuity depending on their particular context.

6.1 Limitations and research recommendations

First of all, it is important to mention that this research was conducted entirely in Spanish, coding was done in Spanish, and I tried, to the best of my capacities, to keep the real meaning of the quotations of students while translating. However, given that translation is interpretative, some meaning might have been lost. This is a qualitative single case-study and cannot be considered representative of a statistically relevant section of the population which opens the possibility for new research on formal learning on WhatsApp to be conducted quantitatively.

Further research could compare learning cultures stemming from different configurations of types of technology and context. A comparison between what is allowed or disallowed by specific learning cultures could bring to the table reflections about, potentially, increased inequalities in education because of its digitalization. Comparative studies could also be done with other vulnerable populations using WhatsApp as a learning tool (refugees for example) and in other countries.

More research could be done exploring motivation and how and if the new learning modalities impact the motivation of certain types of students (for example high achievers). The

same study could be repeated with teachers. It would be interesting to know their experience in the WhatsApp classroom, and what types of teaching were allowed and disallowed.

Education research does not usually use emojis as a method (Bai et al., 2019) however, emojis as a method in educational research could be further explored, especially with youth and in participatory research.

6.2 Policy recommendations

Policy recommendations can span from the national level to the school district level. I will attempt to include recommendations for different levels.

If education provision will become hybrid in the future, then it is the government's responsibility to provide the Internet to all the population. Access to the internet is in the way to becoming a human right; therefore, access should be granted. Here, it is important to note that while the Internet can be considered a public service (and in Peru it is, according to article 12 of the *Texto Único Ordenado de la Ley General de Telecomunicaciones*), the ownership of devices is more of the private realm. If, however, we are talking about public education provision through devices, then considerations on the type of technology, and internet access, should be made to avoid perpetuating learning inequalities. The provision of devices allowing for quality learning and should be a priority of the State¹⁹.

Being realistic, the prospect of providing adequate devices and a stable Internet connection to all the population will be timely and costly. While it should not be disregarded, other actions could be taken in the meantime.

WhatsApp, as it has been argued, is not the most appropriate piece of technology for formal education purposes. However, there are some advantages. The fact that it is so accessible makes it an easy go-to technology. In this sense, and even if the participation of the private sector in the education process should be carefully considered, the Government could advocate with telecommunication operators for other applications, perhaps better for the education process (like Meets or Zoom) to be data-free and therefore more accessible.

More could be done to understand how teachers could use WhatsApp in a deeper way or how to complement it with other technologies better suited for learning.

¹⁹ Actually, in 2021 the Peruvian Ombudsman released a document with the current pending tasks in access to the Internet and technologies for education purposes (Defensoría del pueblo 2021). They look to establishing the access to internet and technologies as a human right. At the same time, they recognise that the available data on Internet connectivity and ownership of devices is unreliable as public sources of information offer contradictory data and are therefore difficult to reconcile.

Policies should integrate emerging technologies (like mobile learning) when planning for teachers continuing professional development. In this sense, it is imperative that policy makers understand that technology alone does not really solve anything. Attention and resources must also be placed on the social and human systems that make technology usage possible (Warschauer, 2004).

At the school administration level, considering what students have mentioned related to homework, perhaps a good suggestion would be not to give so much homework. Quantity does not mean quality, and if students are not approaching homework in a consistent way, perhaps it would be best not to rely on it so much at the school level.

Both the school and the students could benefit if students' opinions regarding their learning process were harnessed. The school could provide *free* guided time for students to explore their learning in other applications and follow other interests (like KPOP through TikTok) and then harness their opinions and integrate them into the formal learning process. Let the students go beyond the walls of the WhatsApp classroom and come back with better ideas for learning.

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8. Annexe

Annexe 1 – In-depth interview questions

1. What do you think about distance learning? Why?
2. What differences do you find between distance learning and classroom learning? Why?
3. How have you felt in distance learning? Why?
4. Would you like to keep learning like this (distance learning?) Why?
5. Would you change something about distance learning? What?
6. What do you think about classroom learning? Why?
7. How did you feel learning in the classroom? Why?
8. Would you like to keep learning in the classroom?
9. Imagine you are the principal of a school. How would you make your students learn? Why?
10. What do you feel when you think about technology (the internet, whatsapp, etc)? Why?

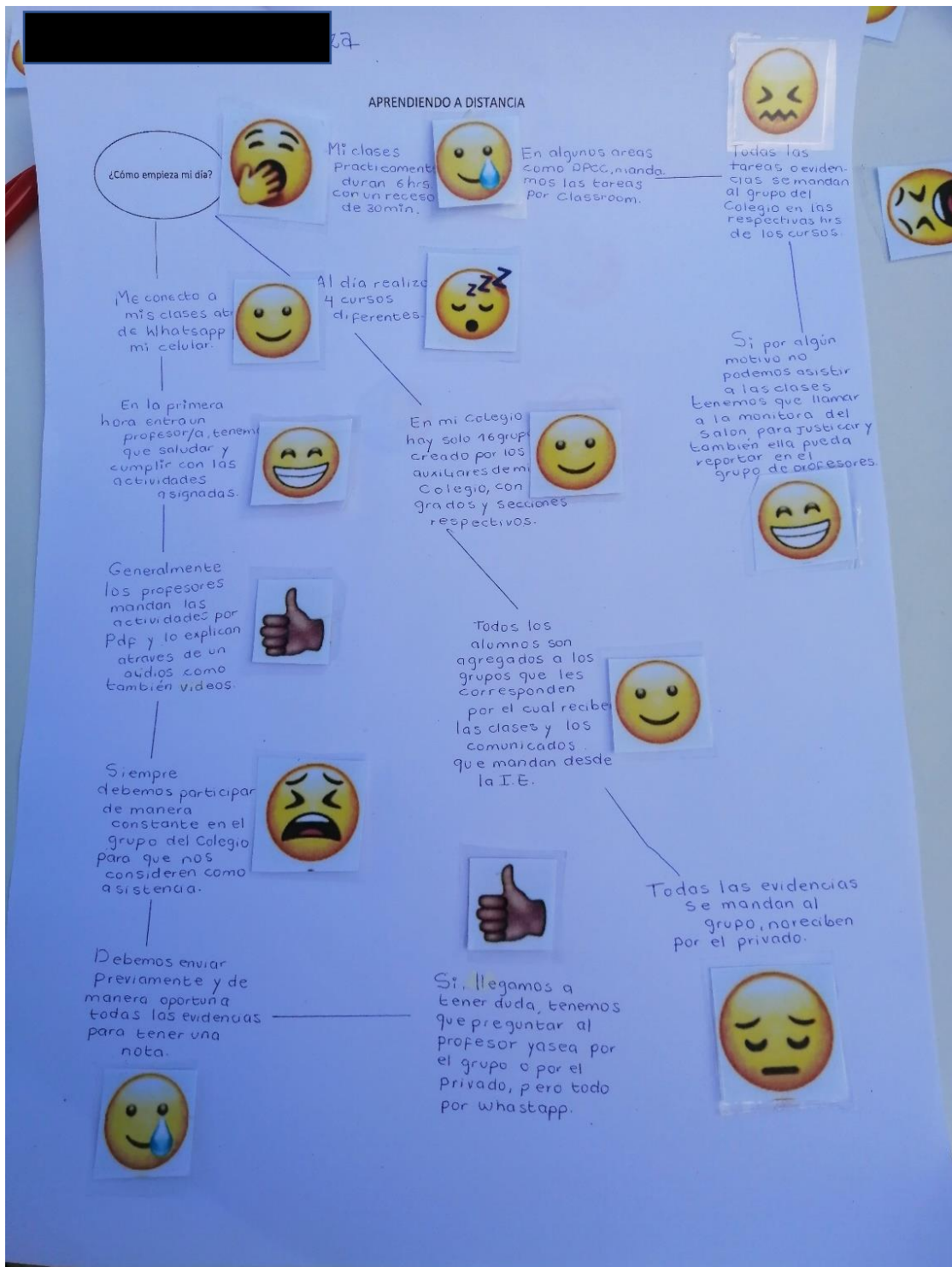
Note: I asked Why? As many times I needed to go deeper into the answer. The questions were not necessarily asked in this order, it depended on the flow of the conversation.

Annexe 2 – Focus group examples

1 – Process



2 – Result (example 1)



APRENDIENDO A DISTANCIA

¿Cómo empieza mi día?

Yo me conecto a través de WhatsApp y por Google Meet en mi Cel. Me gusta participar en algunos cursos por que la participación vale para nota cuando nos mandan tareas y nosotros respondemos para que comulamos mas notas.

Me gusta participar en algunos cursos por que la participación vale para nota cuando nos mandan tareas y nosotros respondemos para que comulamos mas notas.

En Google Meet avanzamos sobre el tema que de hoy vamos a hacer en meet nos explica bien que en WhatsApp y nos hacen hacer las preguntas que nosotros queremos explicar al profesor.

Me gustaria avanzar en meet por que explican bien y nos hacen ver videos que nosotros podemos comprender y para hacer avanzar nuestros clases.

Pero en WhatsApp no nos explican bien por que nosotros no comprendemos mucho.

En meet avanzamos 1 y 2 hora que nos toca con el profesor y en hay nos explica de que forma podemos aprender los estudiantes.

En WhatsApp avanzamos 1 y 2 hora pero el profesor sale y no nos explica a como vamos a realizar.

Es por eso que quiero regresar las clases presenciales para hacer comprender mis profesores.

Por que en virtual no nos explican bien o no comprendemos mucho sobre nuestra evidencia.

Me gustaria aprender mas sobre los cursos que los profesores nos enseñan.

Tenemos un profesor que nos refuerza sobre el curso de matemática.

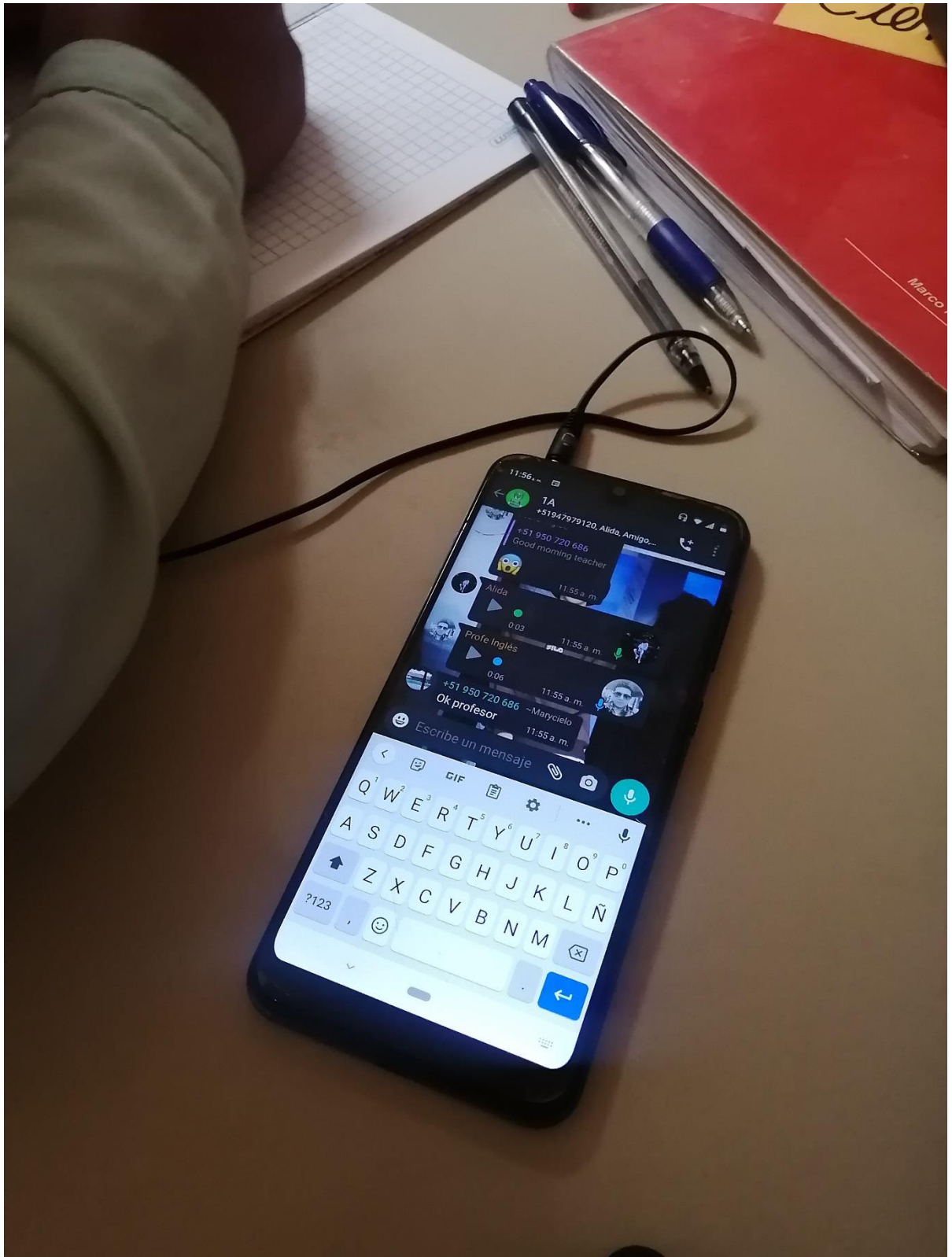
De todas las evidencias que nosotros mandamos es para nuestra nota.

Annexe 3 – Pictures of the location and fieldwork with the students

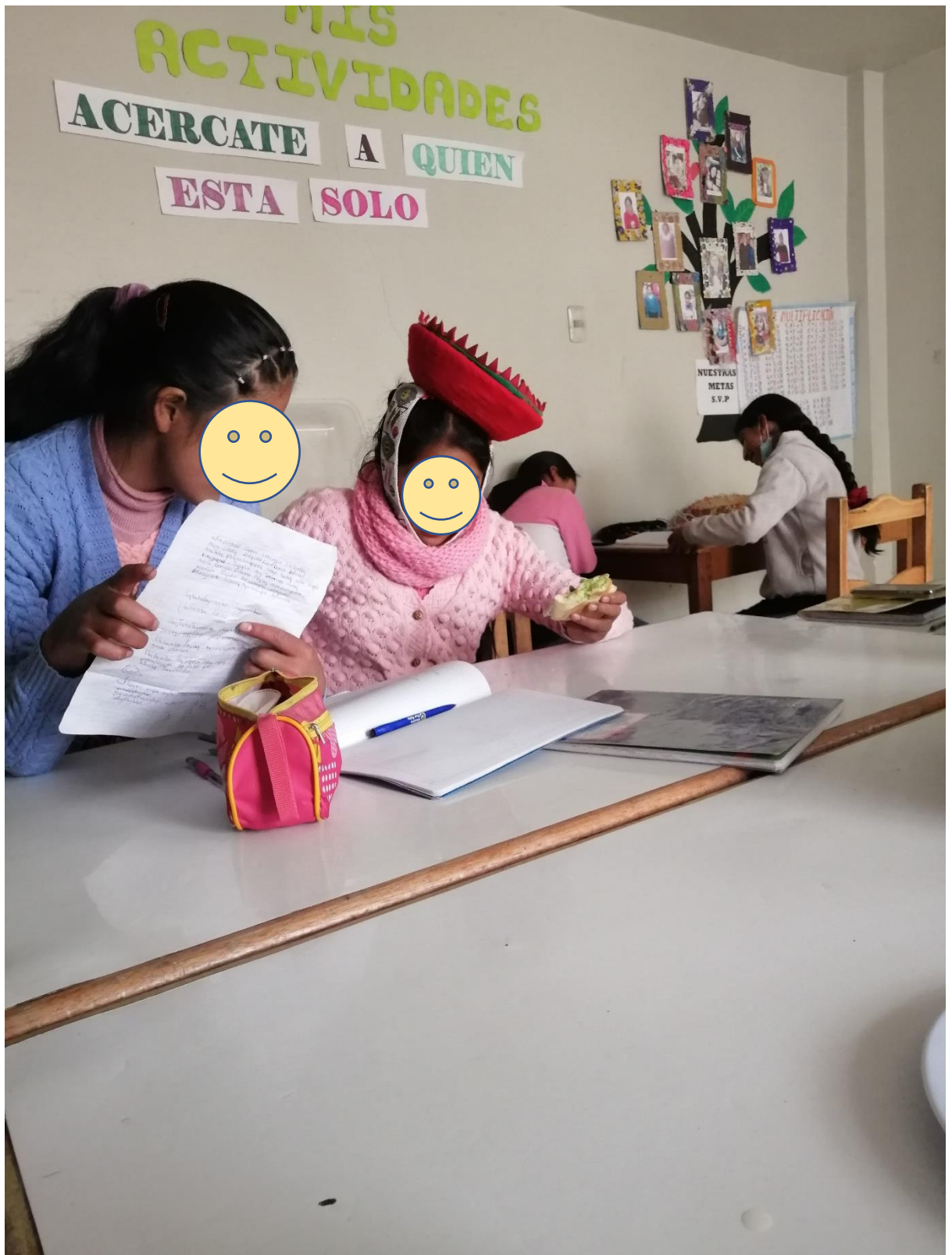
1 – A group of students during their WhatsApp school day



2 – The WhatsApp classroom



3 – Sharing homework (year 2)



4 – Main Square of Ollantaytambo



5 – Apu Ausangate- The students normally live in communities in this area

