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y problematizaciones de las clases virtuales durante la contingencia sanitaria
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The forced migration of the school device into the family space: experiences and problematizations of online classes during the health contingency

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Abstract

This paper seeks to problematize the migration of the school device in the virtual modality – online classes – as a consequence of the health contingency caused by the SARS-CoV-2 virus. Students' written experiences were collected and a non-standardized questionnaire was applied between November 2020 and January 2021 to nursing students of the Instituto de Estudios Avanzados Universitarios and students of Sociology at the Universidad Autónoma de Puebla, both located in the City of Puebla, Mexico. Using the information obtained, some of the material conditions that higher education students have faced are presented, pointing to time, space and physical problems that students have experienced throughout the online classes. Likewise, the discipline, control and surveillance characteristics of the school device are analyzed, in order to problematize its interference in the family space.

Key words: device – school – COVID-19 – education – discipline.

Introduction

As a response to the health crisis brought on by the SARS-CoV-2 virus in Mexico and the world, schools had to migrate their teaching and learning processes into the virtual space. In this respect, the health contingency not only accelerated the migration of practically every educational process, but also outlined a number of advantages and novelties: the use of teaching platforms,

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digital teaching tools, technological innovation applied to virtual environments, and the development of educational strategies for the so-called “hybrid education”.¹

However, this migration brought with it – and also visualized – a number of problems related to the material and possibility conditions of teachers and students in the migration, such as the fact of not having a technological device that allowed them to take classes online, having a deficient access to the internet that makes learning more difficult, rather than easier, or simply not being familiar with the “new” technological tools required to teach or take classes online.

The situation raised a number of questions: What implications emerged from this migration? What happened with the students’ material conditions to learn? Which phenomena come into play in this migration to online learning? Thus, this text proposes to problematize the migration of the “school device”² produced throughout capitalistic modernity as a mechanism for the discipline, control, surveillance and production of subjectivities, which under the circumstances of the Covid-19 pandemic migrated into the space of the family.

For our approach to these problems, we present an analysis emanated from the systematization of the experiences of 76 Nursing students at the Institute of Advanced University Studies (IDEAUNI, Instituto de Estudios Avanzados Universitarios), based on which we created a non-standardized questionnaire with 29 questions. The questionnaire was applied to 211 students: 139 from the Bachelor’s degree in Sociology of the Benemérita Universidad Autónoma de Puebla (BUAP), and 72 of the Bachelor’s degree in Nursing of the IDEAUNI, in November 2020 and January 2021.

The observations and analyses obtained through this questionnaire help us to reflect on the material and possibility conditions in which the experience of forced migration of in-classroom education to online education due to Covid-19 took place for the students.

This also opens a path to problematize the institution of the school as a socio-historical construction, and the directing of instituted and unspoken practices and discourse produced through the “school device”.

Finally, we discuss the space-time displacement of this device caused by the pandemic and its conflictive encounter with the social, albeit intimate, space of the household. In this respect, we believe that the clash produced by the forced migration expresses the tension between two institutions fundamental to social life in modern capitalism: education and the family. Thus, our conclusions seek to shed light on some implications of the “invasion” of the family and home territory by the school device.

1 The software Company Microsoft Inc. has created a platform of support to educational staff through *Microsoft Education Center* to promote the use of the company’s digital tools, platforms and software to create “hybrid learning” environments in “intermediary classrooms”. Cfr. <https://education.microsoft.com/es-419/course/3566b4ff/overview>; Fullan, M.; J. Quinn; M. Drummy; M. Gardner (2020), *Education Reimagined; The Future of Learning. New Pedagogies for Deep Learning; Microsoft Education*. <http://aka.ms/HybridLearningPaper>

2 For the time being, we define the school device as a notion that refers to a social forma with the ability to capture, determine, intercept, shape, control, and ensure gestures, behavior, opinions, and discourse. As such, it is the result of the intercrossing of relationships of power and knowledge (Foucault, 2013; García, 2014).

Methodology

Our research consisted of two processes which themselves include an instrument for each one. First, we observed the educational experiences of the online education of the students during the pandemic, between March and October 2020. This observation was conducted through the systematization of experiences through the grounded theory.

In the second part we applied a questionnaire to 211 students: 139 from the Bachelor's degree in Sociology of the BUAP, and 72 of the Bachelor's degree in Nursing of the IDEAUNI, in November 2020 and January 2021. The systematization and analysis of the data obtained remained at a descriptive level, since our research did not aim to corroborate any hypothesis nor standardize the instrument. For this reason, we did not apply logic-arithmetic statistical tests to the resulting data base.

In the first stage of observation and systematization we adopted the grounded theory developed by Glaser and Strauss in 1967, a theoretical-methodological proposal emanated from empirical material from which categories and theories are constructed based on the collected and systematized experiences (Strauss, Corbin, 1998; Vasilachis, 2007).

This methodology is based on two main strategies: continuous comparison and theoretical sampling. The first one is a process of open codification; that is, the comparison of information, assigning a name the set of data that contain the same idea. Then an axial codification is conducted, seeking to compare similar ideas or topics to each other, which allows researchers to create sets or relate similar ideas and identify the ideas that are repeated or appear with more frequency (Strauss, Corbin, 1998; Vasilachis, 2007). With this movement it is possible to relate the categories that encompass more central ideas and those that are peripheral. During the process of identifying the central category and relating it to the other categories, known as *selective codification*, we may codify the categories related to the most general one (Strauss, Corbin, 1998; Vasilachis, 2007).

In the second strategy, the theoretical sampling, we search for a theoretical framework that allows us to interpret the data resulting from the categories; that is, those theories that may explain the central and the peripheral categories (Strauss, Corbin, 1998; Vasilachis, 2007). Thus, it is through the information gathered from reality that "the data is constructed".

The choice of this theoretical-methodological proposal is set in the context of the online classes during the health contingency, since in the early months of the pandemic (March and April 2020) both Mayleth and José received a number of comments, opinions and complaints about the online classes. However, this information did not go beyond informal conversations in the space-time of the classes, and they were interpreted as part of the widespread discomfort caused by the social distancing measures adopted in Mexico, such as "staying home" due to the pandemic.

However, as the months went by and as a result of the continuation of the lockdown, the complaints became more emphatic and were directed towards feelings of "injustice" and "vio-

lence” on the part of the teachers. Therefore, in order to systematize the students’ information, we conducted an exploration to identify those topics and experiences that the students underwent throughout the pandemic.

The first activity consisted of two open questions on the Edmodo platform:³ “Which challenges have you faced in online classes?” and “Do you believe you have learned ‘the same’ as you would have in in-classroom classes?” Eighteen students of the second year of the Bachelor’s degree in Nursing of the IDEAUNI answered those questions. Based on the information gathered, topics related mainly to internet connectivity, technology, studying at home, work, family, modifications of habits due to the migration from in-classroom classes to online classes, and to the learning process, emerged.

The same questions were used for two other groups from the third and fourth year of the same Bachelor’s degree program. In this case, students were instructed to write a text to answer both questions, underscoring that there was not a minimum nor a maximum number of pages for them write their opinions, appraisals and perceptions of the challenges they had faced in their online classes from March to October 2020. Fifty-eight students shared their experiences in this second moment (10 males and 48 females).

Once we collected their experiences, we began the first open codification process, which consisted of organizing the information of the 18 responses on the Edmodo platform and the 58 experiences of the Nursing students; that is, a total of 76 experiences.

After organizing the information we conducted the axial codification, which consisted of comparing all the responses and topics and ordering them into semantic sets. Then, according to the frequency with which certain topics appeared, similar ideas were grouped together. Finally, we did the selective codification to organize the most frequent ideas into seven central categories.⁴

After their systematization through the grounded theory, we chose four categories to formulate the questions in the questionnaire,⁵ with the aim of constructing an instrument that condensed and made visible those problems identified by the students about online classes during the health contingency.

The categories chosen were: technology, temporality, space, and learning. The first category, technology, included connectivity problems, internet connectivity blackouts, not having an adequate device to connect or do homework or having one that failed during the classes, having to share the device with other family members, having had to get another technolo-

3 Platform used as requested by the General Direction of Incorporation and Validation of Studies (DGIRE) of Mexico’s National Autonomous University to teach classes online. It is a free platform with basic functions to upload and register academic activities.

4 The central categories were technology, teaching, learning, temporality, space, economy and work, and socialization.

5 For reasons having to do with our research, which is ongoing because the application of the questionnaire will be extended to new groups and because we do not seek to standardize the instrument, we found it unnecessary and inadequate to annex the full questionnaire. However, the reader will notice that the analyses following the questions used in it are quoted as they are found in the questionnaire itself.

gical device to be able to study online, feeling a lack of knowledge about technology, having experienced difficulty in learning how to use a computer, and having experienced difficulty in learning how to use platforms.

The second category, temporality, included ways to manage time, modification of habits and routines, effects of the migration of classes to the home space of everyday life and the body.

The third category, space, addressed topics about noise and distractors, and about the characteristics of the family space familiar and the household in the context of studying at home. And the fourth category, learning, explored the topics of the perception of an increase in school work and the general characteristics of online classes.

With the information in these categories we constructed a questionnaire with 29 items distributed in: 8 questions about technology, 5 questions about temporality-space, 4 specific questions on the effects of online classes on the body, including the perceptions of physical and mental tiredness, and 12 questions on the characteristics of school work and online classes. A control question was included in all the categories.

This questionnaire was applied through the Google Forms platform. The link to the questionnaire was sent to the BUAP students in November 2020 and to the IDEAUNI students in January 2021.

The BUAP sample comprised 139 male and female students aged 18 to 32 of the third, fifth and seventh semesters of the Bachelor's degree in Sociology. The IDEAUNI sample collected the responses of 72 male and female students aged 18 to 34 of the first to the fourth year of the Bachelor's degree in Nursing. We should mention that most of the responses in the latter institution were from students who had not participated in the writing of their experiences with online classes.

Neither sample was constructed probabilistically but with the voluntary and informed participation of the students, who constituted on average 45% of the total student population of each one of the two Bachelor's degree programs.

After the application of the questionnaire we began the process of systematization of the responses obtained from both samples, analyzing the data independently for each group; that is, we analyzed first the data from the BUAP questionnaire and then the data from the IDEAUNI questionnaire, with the aim of looking for possible differences between the experiences and conditions of each group. Finally, we compared the data obtained in both applications of the questionnaire, in order to find similar or shared responses.

We must mention that the Benemérita Universidad Autónoma de Puebla is a public, autonomous and decentralized higher education institution that offers 81 Bachelor's degree programs and is located in the city of Puebla. The BUAP is divided by areas: historic downtown, main university campus, health sciences area, language school, cultural university complex and regional units in different municipalities of the state of Puebla, which include high schools, te-

chnical schools and Bachelor's degree programs. The Bachelor's degree program in Sociology is taught at the Law and Social Science School, located in the main campus (Ciudad Universitaria). The Institute of Advanced University Studies, incorporated under code 8955 to Mexico's National Autonomous University, is a private university⁶ with three campuses, two of them in the city of Puebla and the other in the municipality of Atlixco, Puebla. It offers five Bachelor's degree programs: Nursing, Law, Psychology, Architecture, and Physiotherapy. The Nursing students in our sample are in one of its campuses in the city of Puebla.

The main differences between the institutions are the costs of the services offered, their educational offer, their memberships and accreditations, the size and characteristics of their facilities, the number of students and their socio-demographic characteristics.

In that respect, the similarity in the responses of both samples of students was striking. Therefore, based on the data obtained from both applications of the questionnaire and following the assumptions of the grounded theory we built a theoretical framework that allowed us to analyze and problematize the information gathered by the instruments applied.

Based on the information gathered, we must point out that the forced migration of the teaching and learning processes of students and teachers from the in-classroom to the online mode implied two basic assumptions made by the educational authorities: *a*) the *de facto* existence of the material conditions to be able to take classes in this mode, and *b*) the reproduction of the in-classroom school (with everything that it involved) in the space of the family. However, are these assumptions proven in reality? What are the material conditions of the students? Which limits has the reproduction of the school device found in the space of the family?

⁶ The costs of the university vary depending on each Bachelor's degree program and the scholarships offered by the institution. However, the cost is on average between \$1,500 and \$4,500 Mexican pesos a month, plus the re-enrollment fees, student insurance, student ID card and other administrative fees that are paid annually.

Analysis of the material conditions in the forced migration

This section aims to present and contextualize the material conditions of the students in both institutions in terms of access to the technological devices that enable or do not enable them to take classes online, the characteristics of the space at home that have repercussions on the body of the student as physical and mental tiredness, and the everyday distractors that the students find when taking classes online at home. It is worth pointing out that, although the data



Graph 1. Own source

from the Internet Day Press Release (2020) show that 70.1% of the population aged 6 or older use the internet and 44.3% have a computer at home, the results of our questionnaire allow us to problematize these data, since in the forced migration of the classes, the students were faced with a number of difficulties and particular situations. The questionnaire applied showed that 87.1% of the BUAP students have some kind of device that enables them to take classes online, whether a desktop PC, a laptop computer or a tablet.⁷ Moreover, 82% had a technological device before the health contingency began, 6.5% had to buy one, 3.6% borrowed one, and 2.9% do not have one.

Although in general terms we could say that most of the students have technological devices, 61.1% believed that their devices were not adequate for academic work. Likewise, from the 87.1% who possess some kind of not all of them use it exclusively, so 48.2% of the students have had to use their mobile telephone to take classes because they shared the technological device with other members of their family.

This situation turned out to be similar in the IDEAUNI sample, where 88.9% say they have a device for online classes and 80% had one before the pandemic, 11.1% had to buy one, 4.2% use a borrowed one and 1.4% do not have one. 54.2% believe that their devices are not adequate for school work and 49% have had to use their mobile telephone because they shared the technological device with other members of their family.

Finally, at the time the instrument was applied (November 2020 and January 2021 respectively), 1.4% of the total of the sample said they did not have devices that allowed them to take the classes (see Graph1).

⁷ We must point out that we do not consider a mobile telephone a "pertinent" or "adequate" device to do school work. This consideration was explained in the questionnaire.

As can be observed, the percentages in both universities are very similar, with slight variations. In both cases, the responses show the material conditions of the students. Although the figures of the access to internet and to technological devices correspond with the data from the National Survey on the Availability and Use of Information Technologies in the Households (ENDUTIH, 2019),⁸ our respondents underscored that even though they had internet access and technological devices before and during the pandemic, these were not adequate for the forced migration of the teaching-learning processes.

To better understand the problems that arose from the forced migration, we can analyze the material conditions together with other categories such as the *body*, a category that was operationalized through questions about physical tiredness, mental tiredness, focalization of attention and habits linked to sphincter control and the consumption of food, the category *space*, operationalized with specific questions about the characteristics of the space designated to take the classes, the category *time*, about time management, and finally questions about the *control* of distractors, linked to the previous categories. Also, all the information obtained could be compared between the school space and the space of the home.

Body: physical and mental tiredness

Within the category of the body, we defined as physical tiredness “any bodily discomfort perceived by you, from a slight numbness to a pain that makes it impossible to continue your activities”, and mental tiredness as “any psychological fatigue that makes it difficult or impossible to process any kind of information (concentrate in an activity, stay awake, get easily distracted, feeling



Graph 2. Own source.

sluggish or clumsy, yawning continuously, having difficulty reading, not understanding what you read or what you hear, etc.)”. In this respect, 64% of the BUAP students believe that during the online classes they have suffered physical tiredness and 90% mental tiredness. When comparing online classes and in-classroom classes, 63.3% of the students said that they could control their physical and mental tiredness better in the school space than in their home, while in the IDEAUNI 67.7% perceive physical tiredness and 80.6% mental tiredness, and 54.2% of the students said that they could control their physical and mental tiredness better in the school space than at home.

⁸ See <https://www.inegi.org.mx/programas/dutih/2019/>

In the systematization of the experiences, the IDEAUNI students reiterated that one of the factors that contributed to their physical and mental tiredness was the increase in the academic workload (more homework, activities, readings, etc.). On this issue, 77% of the BUAP students believe that their academic workload has increased, and only 13.7% consider it as neutral; that is, that it has neither increased nor decreased. At the IDEAUNI, 68% believe that the academic workload has increased, while 22.2% consider it as neutral.

Spaces

Another factor identified in the systematization of experiences about tiredness was linked to the number of hours that they had to spend in front of a technological device (mobile telephone, computer, tablets), about which the IDEAUNI students claimed that the light of the screen tired their eyesight faster.⁹ Moreover, in their description of the spaces destined for taking classes they said that, unlike the school space, they were not adequate.¹⁰ For instance, they mentioned that their chairs and tables were not ergonomic nor adequate for taking classes for so many hours; many had to take classes on their bed because they lacked a desk and because the spaces of the living room and the dining room were already occupied by other members of the family that had to work at home or take classes in another educational level.

On the other hand, a further factor related to the space were the distractors, of which there were three types: external distractors (tamales or gas vendors, dogs barking, children crying, fights between neighbors, music, etc.), internal distractors such as the activities for the reproduction of life (everyday chores like house cleaning, cooking, etc.), which continuously interfered with the attention needed for the class, and the distractors related to the instability of their internet connection or technical problems with their devices, which made students perform unanticipated activities to solve those problems.

The information of the systematization of experiences corresponds with the responses to the questionnaire, where 55.4% of the BUAP students and 56.9% of the IDEAUNI students said they agreed completely with the statement that the school spaces were more adequate to take classes when compared to those of their home.

Time

As for the management of the time destined for learning, when comparing in-classroom and online classes the students recognize they manage their time better in in-classroom classes. 70.5% of the BUAP students and 75% of the IDEAUNI students believed that in the school space they can manage their time better in regard to their academic activities – doing homework, rea-

9 Information confirmed according to Pérez, Acuña and Rúa (2008). Repercusión visual del uso de las computadoras sobre la salud. *Rev. Cubana Salud Pública*, 34(4). http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0864-34662008000400012&lng=es&tlng=es

10 We will discuss later if the spaces of the school device are actually more adequate, or rather what they are adequate for.

ding, writing papers – and that at home, to the contrary, their family dynamics and the situation of the contingency complicated managing their time to study. Only 15.8% of the BUAP students and 18.1% of the IDEAUNI students stayed neutral; that is, they believed there was no modification in their management of their time to study.

On this issue, the students in both universities reiterated that their difficulties in managing their time were linked to the fact that they became the “least at risk age group”, so many of them were the ones who could leave home to make the purchases needed for the home, increasing their housework workload. In other cases, they had to find a job because their parents (breadwinners) lost their jobs or had their salary reduced. Such situations invariably modified the family dynamics, and therefore their time available for studying.

Distractor control

As we pointed out in the previous section, the formulation of questionnaire items on *distractor control* was articulated with the categories of body, space, and time. Throughout the questionnaire we constructed questions addressing the students’ perception of the role of the school in the learning and teaching processes, but addressing specifically the *control* of some processes: control over the body, control over time, control over space.

These items were formulated intentionally based on Foucault’s ideas about the disciplinary effect of the control devices. Thus, the students were asked to compare their self-control over their body, time, and space, in both the university and in the family space.

Their control over their body was operationalized through two questions of a Likert-type scale on sphincter control and the consumption of food, and a general control question.¹¹ We observed in the control question that 57.5% of the BUAP students and 66.7% of the IDEAUNI students agreed with the statement about greater self-control in the school space, at the university, compared to the family space familiar, while 22.3% of the BUAP students and 18.1% of the IDEAUNI students believed that there was no difference between both spaces, and 20.2% of the BUAP students and 15.3% of the IDEAUNI students disagreed with the statement.

Along the same line, the students were asked if “the school institution has control over the distractors that may affect my learning”. 45.3% of the BUAP students agreed, 28.1% were neutral and 26.7% disagreed. In the case of the IDEAUNI students, 55.6% agreed, 23.6% were neutral and 20.9% disagreed.

¹¹ The control statement was: “I control my body better (in regard to my hunger and my urge to go to the restroom) in the school space than in the space of my home”. The values for the question were: a) I totally agree; b) I agree; c) I don’t agree nor disagree; d) I disagree; and e) I totally disagree.

However, about their ability to *focus* their attention better in in-classroom classes, under the statement: "I focus my attention better during a class in the school space than in the space



Graph 3. Own source.

of my home" we observed a radicalization in their responses. 83.4% of the BUAP students and 84.2% of the IDEAUUNI students agreed totally or agreed, while only 8.3% of the BUAP students and 6.5% of the IDEAUUNI students remained, and 8.4% of the BUAP students and 9.4% of the IDEAUUNI students disagreed with the statement.

Based on the information gathered we may, on the one hand, contextualize the material and possibility conditions in which the students have experienced the health contingency. On the other hand, this information allows us to view in broad strokes some of the material and possibility conditions in which the forced migration of the teaching and learning process took place, and thus the im-

impact of the forced adaptations to online classes on the body as well as on the individual and the family's time management.

Some of these features call our attention to the role played by the school device in the process itself, in regard to its control and disposition of the space, the time, the body and the distractors for learning, all issues we will discuss in the following section.

However, before we move on to them, another issue arises that might seem obvious but that contains important social and political implications to reflect on the evolution of the school device, especially in the framework of the forced migration to online schooling spaces and the economic crisis in which modern capitalist societies are immersed.

In the information obtained about the material conditions in which online education is taking place we notice that there is no significant difference in the ownership/lack of "technological devices" and access to internet between the groups surveyed. One would think that those who have access to private higher education belong to sectors of the population with higher income. However, our data contradict this claim, at least on the level of ownership/lack of the material conditions that make online education possible.

This phenomenon in particular sheds light on the possibility of broader processes of transformation of the school device, at least as far as higher education is concerned, such as the process of privatization public education and its elitization via the selection of candidates through admission exams.

Through this process – at least in the city of Puebla – we have experienced an exponential growth of private universities with “modest” tuitions in recent years,¹² many of them with the official recognition of public universities, mainly the BUAP but also the UNAM, as is the case of the IDEAUNI.

Likewise, the process evidences the blurring of the differentiation between social classes and the increasing precariousness of life, at least in the actual possibilities of continuing schooling with higher education in public or private universities, since in this forced migration both types of university demand the ownership of technological devices, spaces allocated in the household to carry out school activities, and time enough to do it.

The fact that almost 50% of our total sample shared technological devices with a member of the family, over 50% believe that they do not have adequate spaces for academic activities, and approximately 70% express having time management problems, is telling of the real conditions in which the forced migration has taken place and of some of the multiple strategies adopted by families to get around the demands of the educational institution.

Likewise, the precarious material conditions allow us to glimpse the problem of the structural violence in the access to education, which was worsened by the forced migration. This violence is further increased when the teachers demand from the students a number of gestures – such as turning on their cameras – without taking into account the material conditions in which their students carry out their activities.

These kinds of “strategies” adopted by the teachers were an issue mentioned repeatedly in the experiences of the IDEAUNI students, arguing that many of them did not have the “adequate” technology; that is, their computer did not have a camera, or if they used their mobile telephone its battery discharged faster, not allowing them to take their other classes.

For example, we know that at least 50% of our sample have had to take classes through their mobile telephone, but we do not inquire how many of them have had to pay for a data plan or prepaid air time cards, although it is obvious that if the teacher demands they turn on their cameras this requires a greater consumption of power and money.

On the other hand, they also mentioned that many of the students were embarrassed by the characteristics of their home and did not want to turn on their cameras, and when forced to do it they felt exposed or encroached upon their privacy, which led to mockery from their classmates or even some teachers.

In order to delve further into this issue in the systematization of experiences two questions were included in the questionnaire. The first one was “During this lockdown period, have you been required to turn on your camera on at least one occasion?” 74.1% of the BUAP students and 75% of the IDEAUNI students said that they had been required or forced to turn on their camera.

12 In 2019, Puebla was the Mexican state with the highest number of private universities with a total of 486 (Llaven, Y., 3 September 2019).

The second question was “In case your previous response was affirmative, do you agree with the demand to turn on your camera during online classes?” The students’ responses varied: 18.8% of the BUAP students and 25% of the IDEAUNI students agreed that turning on their camera should be “demanded” in evaluation activities, to “have greater control” of the class or “force them” to pay attention. However, 66.7% of the BUAP students and 68.3% of the IDEAUNI students disagreed with the demand to turn on their camera, arguing that this decision should be left to the student.

Likewise, coinciding with the experiences written down by the IDEAUNI students, the BUAP students said they felt uncomfortable when they turned on their cameras because they were “embarrassed” when their classmates and teachers saw the conditions in which they lived. However, we felt that the comments about the “control” of the class or “forcing them” to pay attention were noteworthy. They bring us back to fundamental aspects of the school device that we need to explore further in the next section.

Analysis of the reproduction of the school device in the home

So far we have used the word ‘device’ indiscriminately to refer to technological artifacts such as computers, tablets, and mobile telephones. However, ‘device’ as a concept refers to a social form that has the capacity to capture, determine, intercept, shape, control and ensure gestures, behavior, opinions, and discourse. As such, it is the result of the intercrossing of power and knowledge relationships (Foucault, 2013; García, 2014).

In this sense, the device produces subjectivity as it shapes and disciplines the body; that is, the device directs, shapes, and controls behavior towards certain ends, to ensure and capture gestures, discourse, although it also exists as a space in which subjectivities are produced which continuously resist and exceed the power and knowledge relationships established. Thus, devices are transformed historically due to the tense relationship between power and resistance (García, 2014; Chaverry, 2009; Contreras, 2020).

Michel Foucault analyzed and problematized the historical processes of construction of different devices whose aim was to discipline the body of the individual and his production of subjectivity, which enabled capitalist modernity to expand. Some of these devices were sexuality, law, prison, the medical clinic, and the psychiatric hospital.

Although Michel Foucault never worked directly on the school device, he left some clues and proposals that have been explored by authors such as Álvarez-Uría and Varela (1991), Ball (1987; 1993), Scheinvar (2009), and González (2010), to mention a few.

Fernando Álvarez-Uría and Julia Varela (1991) suggest a first problematization to reflect on the historical particularity of the school device: the difference between “education” and “school”, two concepts that appear interrelated every day.

Education, as we conceive it nowadays, refers to the historical phenomenon that acquired fundamental relevance for modern-capitalist societies, in regard to the teaching and learning

process produced through socialization, the subjectivities for work, and citizenship (Álvarez-Uría, Varela, 1991; Scheinvar, 2009), whereas the school is the social space constructed in order to centralize educational processes. Therefore, we may say that there are other educational modes besides schooling, and educational processes that have been modified throughout the history of modern-capitalist societies, according to the particular demands linked to the subjective characteristics required for work and citizenship (Álvarez-Uría, Varela, 1991; González, 2010).

This distinction becomes important because those two concepts are often treated as synonymous, to the point of naturalizing them through statements such as “education has existed in all human groups” and somehow “there have always been schools” (Álvarez-Uría, Varela, 1991).

In this sense:

The problem is clear-cut: neither is the school synonymous with education, nor are educational rights natural, nor is the public school the progress of Reason. They are dated, they are historical productions, the result of strategies, struggle, techniques, mechanisms and identified social force. The aim, consequently, is to uncover the historical conditions that produced them, denouncing the power strategies involved and the forms of knowledge associated to them, the individuals they try to create, and in general the political and social aims they manifest (González, 2010: 105).

Now, the school is a device as a social form that has historically been articulated with other devices that contain practices and discourse. Thus, the school becomes elementary for the definition of childhood and youth, and it is interlinked with the production of subjectivity for citizenship and is also related to the “family device” or the family as a “policing device” as both a regulator and mediator of social relationships (Donzelot, 2008; Scheinvar, 2006; González, 2010).

This implies that the school device “assembled and instrumentalized a series of devices that emerged and were shaped from the eighteenth century onwards” (Álvarez-Uría, Varela, 1991: 14). On this issue, González points out:

The disciplinary techniques that produce closed spaces, the body of specialists that are in charge of it, the destruction of other, not schooling educational models, and finally the statization of the device [...] that seek to moralize, maintain the children of workers isolated and safe, and thus progressively build the useful and docile citizens needed by the capital (2010: 109).

In short, with the configuration of the school device other modes of education were destroyed and the school was finally institutionalized as the educational space that disciplines the body and the mind. It is thus that “the school substituted learning as a means of education” (Álvarez-Uría, Varela, 1991: 26), as it implies separating the children from the adult world. Socia-

lization now takes place through the school device, and as a part of it, the modern subjectivity of the teacher is produced as a figure that possesses a socially determined and reproduced power-knowledge.

Furthermore, as Álvarez-Uría and Varela (1991) mention, the school device seeks the destruction¹³ of other forms of socialization, such as the one between peers – between classmates – and, as González (2010) adds, it is through its statization that it pursues the univocal validation of the prestige and social recognition of institutionalized education. In Mexico we can observe this situation in the accreditations required by the Ministry of Public Education (SEP, Secretaría de Educación Pública) or autonomous public universities to “validate” any teaching-learning and knowledge production process.

Likewise, the school device includes a series of processes to discipline the body, such as clear discrimination between spaces (which are allowed, which are not), use of time (time to enter class, recess, time for *school work*, time to leave), shaping of gestures, production of desired behavior and extinction of undesired gestures and behavior (Ball, 1993).

Thus, throughout our school life (from elementary school to college), both our bodies and our subjectivities have been shaped and produced under certain parameters and strategic objectives. For example, we have been socialized from an adult-centered and hierarchical framework in which the adults are the authority and are right. This production of subjectivity and discipline takes place in closed and clearly delimited spaces; the bodies have been disciplined in order to maintain attention in certain schedules and conditions, or to control sphincters and hunger. In short, the school device implies the organization of bodies, times, and spaces (Álvarez-Uría, Varela, 1991).

From this perspective, the responses of the experiences shared by the students, as well as the information gathered and produced by the questionnaire, reflect some of the aspects of the school device and allow us to glimpse some of the limits given to the forced migration of the device to the space outside the school, at home.

Although the wager on the statized aspect of education and on the disappearance of other modes of socialization are foundational particularities of the school device, these can be better reflected or observed throughout the history of the device itself, or with another type of processes. However, in the case of our research it becomes even more complex to account for them. That is why we have decided to deal “only” with the process of the production of subjectivity and discipline through the organization of these three different territories: times, bodies and spaces.

The first territory, time, was evidently disrupted by the health contingency. However, the quick forced migration to virtual environments maintained the appearance-mandate of uphol-

13 Although the intention of the device is totalizing, it often does not achieve this because, as a process, it is always open due to resistance and leaks. The students often resist it in a number of ways, such as the forms of sociality or horizontal socialization (Moreno, 2017).

ding the capitalist organization of time; that is, nothing changed because all the activities were maintained, although in qualitative terms the transformations are evident.

For instance, with the forced migration an attempt was made to maintain the socially established schedules to do certain activities, as in the case of the schedules to “attend” classes or in adhering *in extremis* to the institutional school calendar.

About this, some of the IDEAUNI students spoke in their narratives of their experiences that maintaining their school schedules allowed them to have a degree of certainty in their everyday life during the first weeks, since the school schedule provided them with some *meaning*, like a ground or an imaginary and symbolic anchor before an extraordinary situation. However, as the months went by, maintaining school schedules and calendars soon became unsustainable and incoherent in the contingency. Whether due to the material conditions of their internet speed,¹⁴ the need to share technological artifacts with other members of the family, the necessary modification of housework among them or the increase in their academic workload that implied investing more time to do these activities, the early meaning they had had gradually lost its discursive force.

Thus, with the increase in the hours and days required to do school activities, the second territory, the body, began to make itself felt – literally – in their physical and mental tiredness: the extension of the schooling hours is perceived and suffered by the students.

The physical and mental tiredness were associated mainly to the use of screens (computers, tablets, mobile telephones), but also to the apparently inadequate furniture to take class. This is of great interest, since the school device has been constructed under certain intentionalities of control and discipline.

The school premises or physical space of the school is organized to maintain different degrees of control; that is, the school device houses different strategies to control and guide individuals and their behavior (Ball, 1987). We had mentioned the establishment of school days, time cuts and series (schedules), but we could also take into account the strategies to control the students’ *body*, as groups or collectives who are *disposed* in sections and classrooms. At the same time, the school device possesses strategies to control the students’ biological body, from the salute to the flag where the body is “educated” to hold certain positions during times-rituals to strict teacher control to allow students to use the restroom.

Thus, we may argue that the organization of spaces and furniture within the school device are configured explicitly to produce an efficient control and discipline of the students.¹⁵ In other

14 The internet speed depends on the number of users who share the same network or band, so in working hours the network tends to be a saturated and the speed decreases. Many students, especially those in other locations from the coastal states of Guerrero and Oaxaca, were forced to conduct their activities at night, since this was the only time when they were able to log on.

15 We should point out that although we are focusing for the moment on students, the distribution of spaces and schedules is also aimed at the control and discipline of teachers and other school staff.

words, the configuration urges the bodies not to move too much nor too easily, the classroom's distribution helps to fixate their attention towards the blackboard and the teacher, the school desks prevents them to stand up suddenly, and so on. In this sense, classroom chairs and desks have been designed to be ergonomically uncomfortable for the body in order to keep students from falling asleep in class (Ball, 1993).

At the same time, the school device intends students to exert some degree of control over their own bodies: that they use the restroom within certain schedules, eat and rest at given times, etc. Thus, the school device sets limits for activities, spaces, times, and bodies.

On the other hand, in the students' narratives of their experiences some recognize the effect of the school device in their bodies and in their control of their physical/mental tiredness; that is, they grant the institution this regulatory role.

Likewise, a distinction between the groups that we were able to detect was that, unlike the Nursing students, the Sociology students did not recognize the school device's disciplinary function of the body significantly in some items. However, in the control question mentioned above (see Note 10) that encompasses broadly the control and discipline of the body, the percentage of those who recognized that function increased.

Therefore, we believe that this contradiction is not casual; that is, the recognition of the experience of the regulatory and control function of the body by the device, since there is a discussion among sociologists due to the tension between the objectivity of the social order and its norms against the volitional capacity of the social and individual action. That is, the Sociology students express explicitly the tension within their discipline in the production of knowledge, which perhaps causes a contradiction between the power of objective institutions and subjective action.

However, as we have pointed out, in the control and comparison questions the students recognize in certain variables – particularly in regard to attention and tiredness – that there is a significant difference between classes taught within the territory of the school device and outside it, at home or online.

Therefore, the students' responses are peculiar as they explicit that "school spaces are more adequate for them to learn" when in fact these spaces are adequate for control, discipline and "learning", but in a different sense from that to which the students refer: a learning of socially demanded and adequate norms and behavior.

Evidently, this perception is a construction that has been shaped throughout the years, from kindergarten to college. In comparison, the family space of the home and the house has a different configuration from that of the school: generally the restroom is available, as is its access, and its use is often more comfortable than the school's restrooms. Food is often available to eat, and there is a kitchen to cook them in.

In this respect, there are tensions and contradictions between the *disposition* of the time, the body and the spaces of the school device, in its forced migration to learn through online classes, and the encounter with the disposition of the time, the body and the spaces of the family device. In other words, the forced migration of classes to online classes, which involved the total reproduction of the school device, with all its implications and characteristics, found in the home a number of resistances both objective and subjective. We found in its operationalization elements that escape, resist, and overflow the discipline and control of the school device.

For the same reason, many of the school device's demands *lost their meaning* or were seen as invasive, even reflecting their violent and coercive character: for instance, the demand we observed of turning on the students' cameras. Without a doubt, the use of the camera aims to emulate the teacher's omnipresent control and surveillance over the group, the panoptic gaze that watches over and ensures the efficacy of the disposition, just as it would be if they were in the classroom, where through the gradual discipline of the body the teacher's look at the student is enough for him/her to "behave" immediately – almost "instinctively" – as the device dictates: attentive, quiet, serious, concentrated, self-controlled, etc.

Online classes restrict the element of surveillance through the gaze, and therefore the control, of the teacher over the students. Thus, it follows that – at least for the teachers who demanded their students turn on their cameras – an attempt was made to re-establish the device to "verify" that the student "is there", "paying attention" and "behaving properly".

Nevertheless, this demand was experienced as an intrusion of the school device into *another* territory, that of the family. In their experiences, the students told of how their family members demanded they close/turn off their cameras. The reason they gave them was that "they were in their home, and in their home they could move, eat, situate themselves or be dressed¹⁶ how, where and when they wanted". Furthermore, there was a sanction from the family members to the teachers – an overt dispute for power and authority – in stressing and limiting the spaces of influence of the power relationships of each authority figure: "at school he/she gives the orders, but in *my* house *I* do".

However, why and to what extent is the situation of the forced migration and the reassessment in terms of the school device's and the family's spaces-territories problematized? This, we believe, is a fundamental question to continue problematizing the issue and the relationship now.

Finally, it is evident that the forced migration of education to "virtual environments" in the pandemic will not remain in the realm of the virtual. Students need a concrete space to take their classes and conduct their activities, as they need the adequate devices technologies to

¹⁶ We should mention that many teachers demanded the students "dress" properly for online classes, forbidding them to wear pajamas or "informal" clothes. Nursing students were even required to groom (wear some makeup, do their hair) for classes, wear their uniform, and were forbidden to eat or go to the restroom during the time of the class, which was impossible to corroborate if their camera was off.

avoid suffering constant delays or problems and have enough time to meet the deadlines demanded by the school device. However, the conditions enunciated depend or are directly linked to another modern-capitalist institution, in fact one of the most important of them: the family.

What we have seen and heard so far of online education – sometimes in a more covert way and other times openly and frankly – is the confrontation experienced between the school device and its attempts to discipline and control, and the limit that the family device itself has opposed to them.

Conclusions: the school device-family device and other drifts

We have mentioned above some of the characteristics that the school device acquired throughout the advent of capitalist modernity, and how its strategic objective is the production of docile bodies and subjectivities *ad hoc* for capitalism and citizenship. We also pointed out that such production of subjectivity takes place along with other devices, one of them and perhaps one of the most important being the family.

Jacques Donzelot (2008) studied the family device and considered it without a doubt one of the fundamental pieces for social control and discipline. As we explained about the school device, the family device will articulate itself successfully with other devices, for instance with the school. Even though both devices work together for the control, discipline and production of subjectivity of the individual, each one of the devices, particularly the family device and the school device, have been more or less delimited.

What happens, however, when one of the devices, in this case the school device, invades or tries to territorialize the spaces of another, the family device? As we have seen, this produces an important tension between them, a dispute that strains power relationships within both devices and tends, necessarily, to reconfigure such relationships and devices.

García (2014) points out that devices emerge from the social urge to problematize an aspect of life and therefore contain a strategic objective, but that this strategic objective is always malleable, not univocal, and is transformed historically. Are we witnessing a shift in the objective of the school device, or is it only the transformation of some of its functions and strategies that are no longer current?

We do not believe that the objective as such is being modified. However, there is a change in some of the knowledge-power force lines within the device, not only due to the forced migration nor after it, but that become visible thanks to the critical situation in which we currently find ourselves and to their dispute for control within the territory of the family device. If we observe each one of the spaces proposed in the study (body, space and time) we will see this tension. It becomes evident that some limits have been set to the school device, whether after a direct problematization by the individuals or due to the material and possibility conditions in which the forced migration takes place.

We also noticed an emptying of the discursive meaning that supports many of the school device's control and discipline practices, for instance in the case of the teachers' panoptic surveillance. This loss of meaning is worsened when the teachers' authority is questioned by the family device.

We cannot say that this tension between devices is something entirely new, which is of course not the case. However, what used to be taken for granted and almost seemed to be a law, the clear delimitation between the territories where each device exercised its power-knowledge (the school for the school device and the home for the family device), is nowadays being questioned due to the objective conditions of the forced migration, but this is opening a space for the individuals to discuss their realms of incidence and their basic discursive meaning, their social functionality.

We can also glimpse a line of tension regarding the students' physical and mental tiredness caused by all the conditions of the forced migration of the school device into the family device. For now, we notice that the school space is still perceived as adequate for "learning", as opposed to the home. However, could this lead to a problematization that goes beyond the somatic to question the school itself, the very space in which the school device has historically existed?

Moreover, could the same condition of physical and mental tiredness lead to a broader problematization about the control exerted by the school device over the students' body? Could this lead to an organized resistance against the use of the device's power against the body?

In broad terms, we see that there are tensions and contradictions between the *disposition* of the time, the body and the spaces by the school device, in its forced migration to learn through online classes, and the encounter with the disposition of the time, the body and the spaces by the family device. In other words, the forced migration to online classes, which involved the total reproduction of the school device at home, with all its implications and characteristics, found a number of resistances both objective and subjective, and in its operationalization we found elements that escape, resist and overflow the school device's control and discipline.

In conclusion, the home, the family space, has been invaded. As a result, certain limits to the school device have been outlined in its forced migration to the family space: surveillance by the teachers' gaze has been ruled out, the organization of school time has been subsumed by the organization of the reproduction of family life, and the organization of space is a function of the family activities as a whole. Doubtlessly, this and other drifts raised throughout this text, such as the intentionality to reproduce the school device in other spaces like the family space, the students' resistance to it, the different dynamics between students and teachers that have emerged after online classes, and the transformation, adaptation or migration of the school device to other spaces like virtual space, have not exhausted in this article and will have to be problematized in other spaces.

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