

BEYOND THE TABLET, ¿AN INTERMEDIATE ZONE OF LEARNING?

Más allá de la *tablet*, ¿una zona intermedia de aprendizaje?

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Abstract

This research seeks to go deeper into the study of child learning processes associated with the use of new technologies (*tablets*) in the classroom. Experimental and quasi-experimental studies at international level, from the past decade, analyze learning through the increase and repetition of content offered by the mobile device, omitting the experience of apprehending and learning processes that allow the appropriation of the knowledge by the students. So, this research asks: Does the *tablet* collaborate or break the act of apprehending? Is it possible to think about mediated learning by *tablet*? To address these questions, we proposed a qualitative research with a psychoanalytic theoretical framework in 6 public schools in Ecuador. The results have allowed us to identify the «playing», or gaming without rules, as it was proposed by Winnicott, as one of the central elements in the processes of apprehending or subjectivation of learning. Hence, children overflow the activity programmed by the software creating figures and shapes on the screen, exploring numerical possibilities that allow them to think beyond the activity proposed on the tablet. Also, we have identified that it is the teacher who facilitates the learning processes. The children come to her to show her the results, the children use the teacher's words and rhythms to solve the tasks requested by the tablet. We conclude that the educational link in the learning processes versus the use of technologies is significant, placing the teacher as mediator and the tablet as a possible intermediary.

Keywords

Childhood, play, knowledge, learning processes, technology, psychoanalysis.

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Resumen

El presente trabajo profundiza el estudio de los procesos de aprendizaje del niño asociados a la utilización de nuevas tecnologías (*tablet*) en el aula. Estudios experimentales y cuasixperimentales a nivel internacional de la última década analizan el aprendizaje como el aumento y repetición del contenido ofrecido en el dispositivo móvil, omitiendo la experiencia del aprehender o procesos de aprendizaje que permiten la apropiación de dicho conocimiento. Por esta razón se plantean las preguntas: ¿La *tablet* colabora o irrumpe el acto de aprehender? ¿Es pertinente considerar la *tablet* como mediadora de los procesos de aprendizaje? Para dar respuesta a estas interrogantes se propuso una investigación cualitativa con un marco teórico psicoanalítico en seis escuelas fiscales del Ecuador. Los resultados permiten identificar al *playing* (juegos sin regla), concepto propuesto por Winnicott como uno de los elementos centrales en los procesos del aprehender. De ahí que los niños sobrepasan la actividad programada por el *software* creando figuras y formas en la pantalla, y exploran posibilidades numéricas que les permiten pensar más allá de la actividad propuesta en la *tablet*. También, se ha identificado que es el docente quien facilita los procesos de aprendizaje: los niños acuden a él a mostrarle los resultados, usan sus palabras y ritmos para resolver las tareas que se les solicita a través del uso de la *tablet*. Se concluye que el vínculo educativo en los procesos de aprendizaje frente al uso de tecnologías es significativo, ubicando al docente como mediador y a la *tablet* como un posible intermediario.

Palabras clave

Niñez, juego, conocimiento, proceso de aprendizaje, tecnología, psicoanálisis.

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Introduction

The interest in the study on the use of new technologies in relation to classroom learning arises from the request made by the Ministry of Education of Ecuador, which indicates the need to investigate the impact of new information technologies and Communication (ICT) in the child's learning. During the years 2017 and 2018, the Pro-Futuro¹ In these schools, the digital classroom program has been implemented since 2017 as part of the Pro-Futuro Program of the Telefónica Ecuador Foundation. Solution Project has been developed in a ministerial agreement with Fundación Telefónica Ecuador, which consists of the implementation of tablets² with learning software in public schools in Ecuador. From this, research on the uses and meanings of the tablet in school learning arises.³

In relation to international research on the effects of mobile devices on student learning, it is demonstrated that one of the great limitations of research has been to focus on measuring the learning variable as both achievement and increase of content learning. Additionally, the cognitive skills evaluated have been of a lower order, such as memory, attention, and perception, to the detriment of higher skills such as thinking, intelligence and language, related to the analysis and evaluation, training and hypothesis testing (Sung et al., 2016). Similarly, in Ecuador, through the Ministerial Project Use of Tablets in Classroom, the learning variable

was assessed through percentage indicators of letters, words, sounds, and numbers read correctly, score achieved in the exercise of dictation, sums, and subtractions correctly resolved, recognition of figures, among other indicators measured by the diagnostic tests of early reading (EGRA) and early mathematics (EGMA)⁴ (Ministry of Education, 2018) obtaining an impact on language of 0.24 and no impact on mathematics.

In both cases, learning is considered as a dimension that is apparently clear and susceptible to performance measurement, its primacy or preponderance not allowing other forms of expression of thinking beyond the repetition of content, which would be closer to the notion of knowledge (De Lajonquière, 1996). This means that the possibility of giving a place to the game and the error, vital elements when creating hypotheses, is lost; as well as language, a complex structure that implies more than repeating words or numbers.

This article seeks to explore what happens in learning, but not referred to learning processes as cognitive phenomena, but rather about the learning experiences that happen and unfold in the infant in relation to the teacher, and his classmates with the use of the tablet. To this end, we ask: How does learning appear in the classroom? Does the tablet collaborate or break the act of learning? Is it possible to think a tablet-mediated learning?

The approach towards the notion of learning is developed from a psychoanalytic perspective, which allows one to look at learning in a complex movement of apprehending, grasping or subjecting something of external reality (De Lajonquière, 1996; Piaget 1961). Winnicott (1971) locates this movement of grasping the external reality in a space of intermediate zones, spaces that appear between speaker and speaker. Therefore, questions about external reality (numbers, words, objects) circulate in this 'between', overlap and find or get lost between teacher and student, between students, between creating and repeating, between certainty and the mistake.

The child, as the subject of the unconscious, needs to articulate knowledge with that desire to grasp. The game of apprehending for the child is to look for 'something' that makes sense to him, appropriate what is offered, and be able to access the common code that is played in those contents. Subjecting the knowledge offered implies appropriating, incorporating, 'making body' a word, a rhythm, numbers that one can assimilate in your life (Piaget, 1961). The engine of learning starts from curiosity, questions, doubt, silence, error, joke and play. Hence the idea that only another human being can humanize the human being is evoked (Delion, 2018). In that sense, only one human being can teach another.



Acaso (2018) indicates that each person has different experiences in front of the school curriculum, in which rhythms, tastes, interpretations of the different contents are evidenced. These aspects have not been taken into account in international and national research on learning, leaving out the unconscious in education, the invisible.

Next, we review: first, the child's *play* in the act of apprehending; second, mediation in the apprehension: a place occupied by the teacher or the tablet? Finally, a section of conclusions in which the place of mediation and intermediary of the tablet in the classroom is discussed.

The stories and practices presented in this paper belong to children between the third and sixth year of EGB, and teachers who attend six public schools in the cities of Quito and Manta, in Ecuador. To protect the confidentiality of the participants, the names of the children have been changed. The methodological approach of this paper the participant observation method (ten classroom visits) and focus groups with children (six). This material was transcribed and, together with the field diary, categories were organized through open coding, such as: appropriation of the child at the time of learning (playing), mediation in the apprehension, the teacher or the tablet? and the place of error in teaching and learning. When analyzing them, the error category is placed as a subcategory of mediation in the apprehension. It is important to note that, although it is true that the theoretical framework comes from psychoanalysis and its object of study the unconscious, it is not the method of psychoanalysis (the cure, free association, etc.) that is used to generate the obtained information.

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Playing: that useless game so often played by the child

When you enter a classroom of primary school children, the first thing that is obvious is the impression that children are very alive: we see them crawling on the floor between desks, shouting with joy because someone won some competition or pain because someone is crushing their fingers finger or choking them, spinning tops on the table or on the floor... there is no doubt that, they are alive and that life borders limits of pain, destructiveness, surprise, and curiosity (Field Diary, 2018).

The children described in this section wonder intensely about this external reality (numbers, words, objects, etc.) and try to grasp and apprehend "something" of it. Remember that it is impossible to fully grasp reality, therefore we symbolically cut parts of reality to live in it. For this

learning of external reality to take place, the child must strive and want to deploy an intermediate zone or third space (Winnicott, 1971), that is, an intermediate space located between him and the external reality, this space is an area of operation in which the child does not know what he will face and try to wrap himself with his own tools (motor, perceptual and symbolic) to be able to grasp some of that reality that is external to him. These acts and actions in order to grasp the external reality are what make it possible to point out that it is the intermediate zone that allows the subjectivation of the exterior and to convert this experience into learning. Since the characteristic of the intermediate zone is that it is free from the tension of linking internal reality with external reality (Winnicott, 1971).

The deployment of this intermediate zone is sustained mainly by the conscious and unconscious aspects of the child psyche (De Lajonquière, 1992). In the conscious dimension, Piaget (1961) calls them intelligent knowledge processes of reality, and in the aspect of the unconscious, Freud (1905) contemplates the presence of the desire supported in the epistemic drive.

The epistemic drive in the child links knowledge to desire, that is, he wishes to know, as well as knowing bringing him closer to his desire (Frigeiro and Diker, 2005). Its origin is conceived at the psychic level in the desire to see —scopic drive— as well as the desire to take over —domain drive— (Frigeiro and Diker, 2005). This desire to know compromises a symbolic inheritance given by the parents of the child, mainly offered by the mother, who presents the world to the child through her gaze, her voice, her meanings, everything propelled by his desire, and, in a second moment, will come a third party to contribute to the presentation of the law and the limits to the child. Thus, epistemic drive drives the child's questions and curiosity about reality.

Now, it is the desire of the epistemic drive that allows or inhibits the process of knowledge and apprehension of reality, that is, it is the unconscious movements associated with the question and curiosity that allow conscious knowledge. In that sense, the child, according to De Lajonquière (1996), does not know things, the child knows object relations, transmitted by other meanings and allowed (unconsciously) by others; hence objects have their own past and present. From this unconscious-conscious relationship, De Lajonquière (1996) explains that the child tries to reconstruct an imagined reality according to the facts that he can and is unconsciously allowed to perceive. Therefore, knowing implies being able to reconstruct imaginary relationships of objects, act on them



and signify them in their own subjectivity, according to their own desire and unconscious desires of parents, teachers, adults, others.

We will see these acts of apprehending reality through playing, a concept coined by Winnicott (1971), referring to the act of free association of play without rules that children manifest. This psychoanalyst uses the richness of the English language to differentiate the concept of *playing* from *game*, the first referred to the act of playing and the second understood as a regulated game.

Winnicott (1971) proposes playing as an indispensable activity for the formation of the self, whether in children or adults. In the adult, this *play* appears in the puns or jokes.

It is important to clarify that, although it is true, the playing concept arises from the spontaneous game in the therapeutic space of a psychoanalyst determined by the psychic structuring of the speaker and the therapist's technique, it is considered appropriate to use this concept in the classroom, posing inequivalent differences that the classroom space has compared to the therapeutic space. As it will be exposed, sounds produced by the children are observed in the classroom such as hitting the table with rhythm, humming songs, whistling, dancing, while the class takes place; drawings and the confection of origami and paper figures also take place. This type of playing in the classroom is probably invisible to the teacher's gaze and unusable as long as it does not manifest, apparently, a determined or expected end within a formal conception of education.

These playing moments try to subjectivize some aspect reality, they are the moments where the child escapes from the content officially given at the time of class, escapes to his stories and creations; therefore, it displays a potential space of creativity or intermediate zone in which it seeks and creates objects, advances in its own imaginary re-creation of external reality (De Lajonquière, 1992), moving away from a linear and cartesian thought (Yáñez, 2016).

These spaces displayed by the child, simultaneously with other children, can be superimposed and thus sharing a common experience such as learning. Winnicott (1971) is emphatic in pointing out that this play that does not have an explicit purpose "naturally leads to cultural experience, and really constitutes its basis" (p. 142).

Next, subcategories of game analysis observed in the classroom before and during the use of the tablet are described.



Analysis 1: playing with rhythms, shapes and movements

Observation 1.1. At the start with the use of tablets, Diana and Carolina, pass their finger pressing the screen, just where the digital date and time appear on the home screen, pass their finger over and over those numbers, drag the index finger on small circles and lines, they insist on this movement, they discover that under those numbers one can see words, they insist wanting to decipher these letters, then two overlapping levels of content appear, two different screen colors, as if they were two different layers, they insist looking for something, a texture? They play a sort of veiled and manifest transparency of what the screen shows and hides. The game ends when the screen is unlocked (4th EGB, Manta, 2018).

Observation 1.2. In one of the activities proposed by the tablet, children can write on the screen using the finger, the finger stroke becomes the lines of a word, depending on the button chosen with the same finger they can erase or use other colors and thicknesses. They write the words with only one finger, keeping the other fingers and hand in suspense as if nothing else could touch the screen more than the index finger. They do it carefully, neatly, silently holding their breaths to avoid mistakes. Children say it is one of the activities they like the most (4th EGB, Manta, 2018).

Observation 1.3. Several students make folds in some sheets of paper hidden under their desk (in a dark space that does not reach the ground or the sky), which is between those places, and that allows them to continue attending the language class while folding planes, flowers, and ninja blades that, as a sample of their ability, are exchanged at the end of class, something like if their product, as if their class result, was not only to repeat what the teacher tells them to repeat but to say or show that they could create artifacts to play at the next hour (3rd EGB, Manta, 2018).

Observation 1.4. José asks Daniela: how did you make the headphones in your drawing? Daniela responds you have to draw around the head just like when you make a rainbow and you will get the headphones. José asks ¿And for drawing someone sitting? Daniela tells him that to draw someone's legs in profile she draws a single leg at a right angle (focal group, 5th EGB, Quito, 2018).

Observation 1.5. While the teacher explains what the omnivores, herbivores, insectivores, and carnivores mean, at least two children touch with their fingers small jelly cups under the desk, squeeze them, stretch them, take them out of the glass and put them back. Another girl checks, looking at her teacher, a box with beads inside the desk, counts and orders them. Another child spins a 25-cent coin on the desk and looks



closely at its trajectory until it stops moving or falls to the ground (3rd EGB, Quito, 2018).

Observation 1.6. The teacher delivers words written on cards; children have to identify their accent classification. A child takes a cardboard piece with the word inscribed: he reads it, he takes it with his thumb and forefinger in half and then he starts beating it in the air as if he was going to fly. He looks closely at the movement generated by the undulation of the cardboard. He tells the other children that he is flying, he poses it on the edge of his partner's chair sitting in front of him, moves it abruptly, and then delicately watches the movement produced with arrest. He waves it hard and brings it close to his ear as if he wanted to listen closely to the noise emitted by its movement. He looks at the cardboard as if he was telling a story, bring the piece to the window and stares at the sky, as if the word-bird had gone with him outside the class. Then it was his turn to quickly paste the word on the board when, he returned to his seat, he looked at the window again, as if looking at that word for the last time - a bird that came out with a part of it (5th EGB, Quito, 2018).

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These vignettes illustrate the questions children ask in relation to movements, shapes, construction of figures and textures. This leads us to think about the place of the physical experimentation of reality, palpable and felt which the apprehension implies, and with it the importance of the use of the senses. Tisseron (2013a) emphasizes that before the child can play with virtual cubes, the child must go through the experience of playing with tangible cubes in material reality, otherwise, he will not know how to play with them.

Thus, knowledge becomes body in the child. The child traces and writes in a particular way moves a paper with a flying rhythm. In this way, the child not only apprehends a cognitive notion from the outside, but that act of subjectivation of the external reality becomes movement and gesture in it. Rodulfo (2016) states the relevance of the rhythm, the sequence, the pauses of the objects presented to the child, in explaining how the body is constructed from the rhythm:

We are made of motives of incessant process of variation, repetition, transformation; in turn, we are polyphonic, us a single incessant melody does not make, no matter how many we can recognize in our existence, we sound on several simultaneous planes, more or less unconscious, more or less conscious; we recognize ourselves or we can be recognized in certain rhythmic, harmonic, melodic singular traits, that are quite specific and never identical to those of other neighboring subjectivities; this network of motives crosses our word, our games, our motor skills,

in short: the motive does not circumscribe one of these territories and means of subjective writing; our affectivity, therefore, is woven with a whole range of rhythms, velocities, accents, intensities, tones, sound and silent atmospheres (p. 99).

The child creates movement with a paper, escapes from the class in the imagined flight of a bird-word, the child escapes to an invisible dimension. Cobo and Moravec (2011) raise the relevance of ‘invisible learning’ in the face of the use of technologies, in which the child learns in a self-taught way, gathering information seen and clipped from others outside formal learning, that is, creating when nobody sees it. Now, one can criticize Cobo and Moravec (2011) in their notion of invisible learning because it does not mention the importance of the repetition of content and rules. That is, the child runs away because there is a place from which to escape, a repetition that allows creating a space produced on the margins of a formal school class. Winnicott (1971), in that sense, raises the importance of the game or regulated play as a complement to *playing*. Compont (2018) adds that this relationship is not antagonistic and even the first is a condition of the second, so the *game* allows playing and *playing* consolidates the apprehension of something.

In this sense, playing consolidates learning to the extent that it produces curvature movements that distort external reality (Rodulfo, 2016), this invites to overcome the notion of learning associated with the ‘Gaussian curve’, flat and linear versus a mobile and asymmetric curvature of learning.

It is not only the elaboration that the child creates but the encounter with the possibility that something of sound, of the unforeseen and of the outside of the class, will surprise him while he seeks to pay attention to the words that the teacher exposes and proposes; thus also creativity is involved in what his hands form and deform. How they play in their twenty-centimeter hiding place, a place of their own, a cave hidden in the desk, perhaps a cavern in which, unlike Plato’s cave (1978), they need to enter to explore the transcendence and that there is something more behind those shadows and reflections explicitly indicated in class.

Analysis 2: playing with numbers and infinity

Observation 2.1. Olga says that what she likes best to use on the tablet is the calculator because she can do additions. Leo adds to this comment that as soon as he began to know the tablet, he also got into the calculator to know if the number two hundred plus forty thousand existed (focus group, 5th EGB, Quito, 2018).



Observation 2.2. Natalia indicates from a drawing, that you can reach the sky, and since the numbers are infinite, she says that with the numbers you can go as far as you want. Researcher: how is it to reach infinity? Juan says: playing, until one is wrong. (focus group, 3rd EGB, Manta, 2018).

These vignettes illustrate questions about an exploration of the physical field that children do. They ask about numbers and infinity, evoking in both concepts dimensions of the eternal. Children mention the use of the tablet as a means of access to what is referred to as infinity and the extensibility that is not reachable by the human mind. This is one of the first meeting points of the man-machine relationship in which, through the calculations and sums of numbers, something impossible is achieved.

Learning notions around mathematics becomes a game of adding impossible figures. This children's exercise of adding sums uncovered in the classroom allows them to think about relationships of numerical objects that are repeated to infinity. Here questions about the impossible can be revealed, that which escapes the humanly possible record.

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Analysis 3: playing on own explanations and jokes

Observation 3.1. The teacher asks, what do dogs eat? the child answers: my mom prepares bone broth. Teacher: and what fish do eat? Child: lettuce and tomato salad. I have a question: how do fish drown in the sea? (3rd EGB, Manta, 2018).

Observation 3.2. The teacher explains to the children: what do we call animals that eat plants? Those who eat meat, we will call carnivores, those who eat insects, insectivorous, and those who eat grass? A child responds: vegetarians (the whole course laughs). The teacher explains: there are animals that eat everything, such as the pig, if they give it grass, the pig eat grass if they give it waste, it eats waste, how do we call that animal? A child answers: glutton (3rd EGB, Quito, 2018).

The vignettes illustrate how children seek to share their own interpretations and apprehended meanings with their classmates and their teacher, about their ideas about feeding animals and how this laughter shared by the class becomes a social bond. They share their own subjectivities with the idea of weaving an experience shared with others. The presence of the joke allows the superposition of intermediate zones played between all. By way of censorship, an unusual explanation allows a common and agreed response, that is, a shared experience.

It also allows us to remember, as Freud (1906/1992) elaborates in his work *The joke and its relation to the unconscious*, to the joke as a social process, as well as the difference that inhabits between the comic and the joke regarding the need for the joke to be told to another:

We cannot in the first instance guess what the basis may be of this urge to communicate the joke. But we can see another peculiarity in jokes which distinguishes them from the comic. If I come across something comic, I myself can laugh heartily at it, though it is true that I am also pleased if I can make someone else laugh by telling it to him. But I myself cannot laugh at a joke that has occurred to me, that I have made, in spite of the unmistakable enjoyment that the joke gives me. It is possible that my need to communicate the joke to someone else is in some way connected with the laughter produced by it, which is denied to me but is manifest in the other person. (p. 37)

Mediation in the apprehension: The teacher or the tablet?

So far, we have described how the child spontaneously displays *playing* with or without a tablet inside the classroom. Now, playing becomes indispensable for apprehension, insofar as it was shown that subjective constructions of reality are present. So far, the figure of the teacher external to play has been evoked, however, it is the teacher who empowers and transmits a form of relationship with the external, therefore he allows or inhibits play. This section seeks to highlight in detail the modes of transmission that the teacher proposes to the child about the learning with technologies, furthermore, the use and place that the teacher gives the tablet during the class was carefully analyzed. Next, three subcategories of analysis are described, referring to: the tablet and the living, the place of knowledge in the exercise of the teacher and the teacher as a figure that can express more about the error than the tablet.

Analysis 1: the teacher relates to the tablet as if in it inhabited some living thing.

Observation 1.1. The teacher uses a microphone to give the class, at the time of using the tablet, she tells the children to prepare to use at the same time, for this, she counts up to three and at the end of her instruction she places the microphone in the audio of the tablet, she passes the microphone from her mouth to the ‘mouth’ of the tablet, as if creating a continuum of her voice with the voice of the tablet, the sound is amplified throughout the class, as if it were the extension of the teacher’s voice. After the instruction of the tablet ends, the teacher directs the microphone towards her own voice (3rd EGB, Manta, 2018).



Observation 1.2. A teacher, at the time of distributing the tablet to the children, points out that they should leave the tablet face down on the desk because she is asleep, is resting, and that when everyone has the tablets, they can wake her up. Some children bend their arms on the table and rest their heads to the side as if they also slept next to the tablet (3rd EGB, Quito, 2018).

In both situations, the tablet is given certain living attributes, as Burckhardt and Höfer (2017) place it in the notion of animism of the digital as transparency or “reciprocal and total penetration of the digital space and of physical space” (p. 119).

What we have seen in the vignettes is a certain example of this, either by extension of a human function such as speaking or attribution of a biological function such as sleeping and waking. In the first case, the tablet becomes the extension of the teacher’s voice, who finishes the instruction and gives rise to ‘the voice’ of the tablet. In this gesture of extension of the voice through the microphone, it would seem that the teacher gave the tablet the power to speak and, with it, the explanation of some content of the subject. This is a second moment where a boundary is blurred between the function of the machine and the function of the human, can the machines speak? Can the machines teach? Speaking is an exclusively human faculty, the exercise of speaking does not have to do with the ability to repeat sounds or display information, it has to do with the ability to create, create with lapsus and that in that lapsus may be surprising in their the polysemic richness that the use of language and word allow. The word shapes the experiences that the child lives signifying experiences and relationships with objects. The words are given by others and built by the child, so we can understand, for example, when a mother counts the times she has insisted for the child to repeat the word ‘noodle’ in front of that plate of food until finally, the child ends for saying ‘I want spaghetti’ and the mother says ‘nobody taught her that word’. Why did she choose that word? Because precisely speaking is choosing, there is a decision to say in a certain way and not in another, a condition that allows subjectivity, so speaking is a humanizing act.

This vignette about the place of speaking allows us to indicate a first function that distinguishes the teacher’s voice from the machine, it cannot speak even though it has ‘voice’, or rather a sequence of phonemes, programmed to be repeated packaged free lapsus, it has not surprise nor variation with regards to another, a fundamental condition for the educational link and teaching. The educational bond is one of the forms of the social bond, which propels the particular, and that cannot be sustained



without transferring it to another, and the transmission of a desire to be able to sustain that space in the classroom (Tizio, 2003). Learning depends on the desire of the teacher who wants to transmit knowledge that does not belong to him, that is, the teacher can “transmit the legacy of generations, the symbolic heritage so that the subject finds his place there” (Tizio, 2003, p. 175). The teacher provides the child the space to find answers, and his way to the social and cultural (Frigeiro and Diker, 2005).

In the second vignette the teacher brings forth the idea of a tablet that sleeps and rests, which causes some children to sleep next to the tablet, do they imitate it? This is a gesture made by children in which the sleeping of the machine extends to the sleep of the human, and that only the teacher can authorize the awakening of the machine and the human. This is a second moment of animic extension of tablet to the human. Why insist on animating the inanimate? Perhaps as a way of solving the fear of the strange, that other stage, the stage of the unconscious (Freud, 1919/1992), can also be an invitation of the child to establish a close relationship with the object.



Analysis 2: Who knows more, the tablet or the teacher?

Observation 2.1. The teacher tells the children: do not despair if today you could not use the tablet, you are children and know a lot about technology, sometimes even more than the teacher (3rd EGB, Quito, 2018).

Observation 2.2. All the children work on the tablets, during the class they were moving, laughing making noise. Now they are silent, without moving, working as groups, pairs or alone, on foot or sitting, all looking at the tablet. The teacher is no longer in front of them as he did during the first moment of the class, he stands aside, backs off, steps back from the place he occupied, approaches me and says: there is where we are going, to children learning like this, and they needing the teacher less and less (5th EGB, Quito, 2018).

Observation 2.3. I ask the children of the focus group, and if they have doubts about how to use the tablet if they ask the classmate or the teacher? in a chorus all the children respond strongly saying: to the teacher! they looked at me as if challenging me for having asked this question. I ask them, do you always ask the teacher? Juan: Yes, because children don't know about some things. José adds: yes, but that's why we are in school, to learn. Daniela says: but we know more about technology... my grandmother says that children know more about technology than about studies (focus group, 5th EGB, Quito, 2018).

Observation 2.4. Andrés is a gamer, he is recognized by his groupmates and is defined as such because he plays online every day in a game called Free Fire, despite not having access to the internet at home, he uses the work internet of his mother, knows the score of each of his classmates. While it is true, he does not have good grades, children with good performance in the classroom respect him as an authority in virtual games. I ask him about the difference between using a tablet in the classroom and at home... where do you learn more? thinking that the tablet in the classroom would bore him for the lack of interactivity like in online games and maybe he would tell me that he learns more at home, he answers me: the video game is for playing and the tablet in the classroom is for learning, in one you play in another you learn (6th EGB, Manta, 2018).

These examples show how children specify the place of learning, different from that of virtual games. On the one hand, this idea appears that the knowledge of technology is not synonymous with the knowledge of formal or curricular studies. Also, this knowledge of studies and learning is found in school and in the teacher. It is striking how children are emphatic in indicating that the teacher is the one who knows. When the researcher has proposed that others—different from the teacher— can contribute knowledge, such as classmates, children get angry as if this proposal touches something serious, such as a prohibited action, as serious as a taboo.

These children's signals about technology and knowledge are not so clear for teachers. In one of the vignettes, the teacher doubts his teaching place in the face of new technologies and thus evokes the tablet as another possible teaching figure. The debate between knowledge and wisdom proposed by De Lajonquière (1996) allows us to shed light on this since knowledge is in the order of information and the ability to associate what has been produced, while wisdom will have to do with the unconscious desire, that is, a record that the speaker does not know he knows, that is being played out and producing an effect on the possibility of the emergence of knowledge (De Lajonquière, 1996).

It is clear that Internet access allows the child to have an unlimited amount of knowledge and information, that is, the tablet can be an object that collects large amounts of information; however, the accumulation of information is not comparable to the transmission of knowledge and wisdom.

Observation 2.5. In the class developed by the teacher, before starting with the use of the tablet, he carried out an exercise of separation of syllables with applause, so the children played with the rhythm of the hands and their voice. At the moment when the children had to identify the accent of words in the tablet, several children begin to applaud and



rhythm the accent of the words with their own voice. I point out to the teacher that children move their hands separating the syllables as they learned with him (5th EGB, Quito, 2018).

In the gesture of clapping and using the voice to sing the syllabic cuts in the words, as they learned with the teacher, the children evoke the educational bond (Tizio, 2003). At the end of class, in the observed courses, a large number of children approach the teacher to show that they have finished their activity. That is to say, there is a permanent search of the gaze, of an answer on the part of the teacher.

This link established between the child and the teacher surpasses the tablet, it supports or not the learning process, but does not replace him. The strength of the bond between the child and the teacher is observed in the pact created between the two, this pact speaks of the trust of one towards the other.

As a researcher, I could not understand how children repeated the classification of animals (herbivores, insectivores, omnivores, carnivores) and words (accents). I constantly asked myself, what is the use of knowing that if one later forgets? or why are the teacher's questions designed to be answered as a Gregorian choir? For an adult this could be considered a nuisance, in these answers, there is a group voice that responds the same. I wondered why children accept this? (Field diary, 2018).

The children navigate those fluids full of content, some viscous, strangers and foreigners, trusting that it is a path drawn by someone who is sometimes interested in them being able to learn. This relationship towards formal learning also implies a type of relationship with classmates, a group similar to a Gregorian choir is set up, which repeats short sentences or words that complete the sentence indicated by the teacher. When one of the children exposes some extensive personal response, he receives censorship from his peers, who refer him to the choir. We see how, perhaps, even the child's individuality is subject to the group of children when facing an adult. However, as proposed in the first section, playing allows placing something of the child's private world, which gives him relief in the encounter-or not of being in the group.

Analysis 3: the teacher, a human who can evaluate and say something else about mistakes

Observation 3. 1. Mariela points out that at home she is nervous about playing videogames, she says: I get nervous because I think I'm going to die at any moment. I point out that they are not going to die on the



tablet, do they still get nervous? Mariela says yes, she says: I get nervous because you are working and you don't know if are going to get a four, a six or a five. José adds: while I was doing the spelling exercise, I became super nervous, it is the same as an exam, only that it is playing like that and not on a sheet... I get nervous like I'm going to get a bad grade (focus group, 5th EGB, Quito, 2018).

Children who use technologies are usually invaded by sensory stimulation that they cannot process alone (Tisseron, 2013a), hence the importance of having an adult that allows them to say something of their experience to build a narrative plot, otherwise the Child accumulates sensations without a purpose, which can potentially produce psychic discomfort (anxiety, omission of oneself), as well as stereotyped uses of the tablet (Tisseron, 2013a). Children say they get nervous, remembering how they die as avatars in video games. This sensory invasion means that there is a constant tension in the emotional field that adds to the tension of the grades obtained at the end of the activity on the tablet.

In all the observed classes, the children were waiting to get the correct answer to get a ten at the end of the activity.

Every time they had a correct answer, they applauded, shouted, and said the right answer loudly. In a sixth-grade course, students wrote the answers on a small sheet that circulated throughout the class (Field Journal, 2018).

This situation allows us to look at the place of evaluation and learning mistakes. Evaluation is one of the moments where what the child has learned or not materializes. And this becomes instances of great tension and discomfort, both for children and for the teacher. Many teachers point out that evaluation is what takes time away from teaching; Likewise, some “teachers ask in the training sessions, if the tablet helps them with the automatic evaluation thinking of this procedure as a relief (Field Journal, 2018). That is, the evaluation of the tablet software supplements that of the teacher, which makes it possible to ask the question: what type of evaluation the tablet cannot perform? For example, the tablet cannot realize that a morning someone had a family problem and is in an irremediable unease which makes an evaluation meaningless. Perhaps the evaluation makes more sense when you understand the games that make up that apprehension, more than grades that do not account for that student's true condition and situation.

Under the evaluation is the place of error and, in the case of children and teachers, the terror of error. The concept of error has mutated



towards the search for a culprit, on the one hand, it is considered that it shows the teacher's bad practice and in the case of the child the error has become a bad precedent at the level of mental development, 'the son to hide', something shameful and has ceased to be for exploring, as a place of inflection, of possibility, of potentiality (De Lajonquière, 1996; Trawny, 2016). It is precisely the error that makes us human, humanizes us, expressed that we live in a process of marches and counter-marches of apprehension. The tablet does not know how to return an error, it does not understand the logic of the error, it cannot evaluate processes, because it lacks what it implies to be affected by the other; in terms of Flores and Porta (2019): it cannot offer the other an ethic of hospitality and recognize him as 'other' (Joaqui and Ortiz, 2017). Hence the relevance of asking ourselves about who is the one who mediates the experiences of apprehension in the child inside the classroom, although the teacher himself doubts about this, the answer is the teacher. Freud already mentions it, "it is human beings who can only turn another a human being" (Delion, 2018, p. 22). From the above, the teacher is recognized as this great mediator of the apprehension experience, since only by sharing about the experience can it be elaborated (Tisseron, 2013a).



Conclusions

The text analyzes the question for the apprehension and the tension with the introduction of new technologies in the classroom. In this way, the questions that circulate around the tablet's entry are: Children apprehend with tablets? What do they learn? What is the place that teachers occupy in this relationship? And finally: Is it relevant to consider the tablet as a mediator of learning processes?

Accordingly, there has been talks about the relevance of the dimension of the invisible in learning. Children display a unique game during class with and without the use of the tablet, understood as playing (Winnicott, 1971) that allows articulating the formal content delivered by the teacher with the child's own ways of understanding external reality. The article highlights this body and rhythmic game proposed by children in class as a vital moment for the consolidation of learning within the classroom. Thus, the repetition of formal content and traditional pedagogy (Aguilar, 2019) could become the edge that supports the deployment of an intermediate learning zone of the child.



The article also explores and proposes the place of the educational link between the teacher and the child as a central element in tablet-mediated learning. In that sense, the relevance of voice, speech, error, and desire for transmission that can only be delivered by the teacher, immersed and entertained in a culture and history is underlined. At this point it is relevant to mention that the tablet is located in a place of intermediary and not, for the moment, of mediation (Latour, 2001) of learning. This notion of intermediary and mediation of Latour is taken to point out the difference in relationship that children and teachers establish with the tablet in the question of learning, these categories are chosen despite the fact that Latour does not adhere to the idea of a subject differentiated from objects and even less a produced speaker and producer of the unconscious. The intermediary dimension refers to the idea that the actor or actant of the network, in this case, tablet, is defined in a function proposed and agreed by the educational group, which compresses it to an entry and exit system, but not in the ability to affect and transform others, a central feature of mediation networks. Thus, the use of the tablet in the slogan of this project implemented in public schools is limited to a moment of the class, intended to reinforce certain content offered by the teacher; It also allows the circulation of questions among children ultimately referred to the knowledge of the teacher. It is with the teacher that the children use the tablet, they applaud as he did, they show him the results of the activity, they wait for his voice to move forward or backward. The teacher is the great mediator of learning and the tablet is an intermediary.

Thus, the teacher as a transforming actant begins to libidinize, present and invest in meaning the classroom space, this along with the entry of the tablet as a new resource or intermediary tool in the commitment to learning. What can become in the first step for the tablet to become appropriate in use that responds to the educational context (Dillenbourg et al., 2013) and potentially become a mediator in the sense of Latour.

Now, wondering about the entry of “new” objects as mediators in learning is of vital importance, since ministerial logics always point to educational innovation through the entry of new objects. At one time were electronic boards, computers, tablets, perhaps in the future an android, at the expense of the central element of learning: the educational link.

We are not condemning the entry of technological objects. It has been seen how the tablet begins to be located in the middle of the relations of the classmates, in the middle of the relationship between teacher and student, that is, it begins to appear as a propellant to create a social pseudo-link, with a pseudo-speaker, that could begin to occupy an inter-

mediate place, potentially creative, that allows looking for certain meaning (Winnicott, 1971). However, it cannot become an object that dictates the truth or meaning of life; in that sense, this could generate a stagnation in psychic production, in which one apparatus dictates a truth and the other is condemned to receive it without any meaning conveyed in it.

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Notes

- 1 In these schools, the digital classroom program has been implemented since 2017 as part of the Pro-Futuro Program of the Telefónica Ecuador Foundation.
- 2 Tablet is a word from English, translated into Spanish as 'tablet'. According to the RAE, it is defined as a portable electronic device with a touch screen and with multiple features.
- 3 Research from the Catholic University of Ecuador entitled *Studies on the uses and meanings of digital classrooms in relation to childhood school learning in Ecuador*.
- 4 EGRA (Early Grade Readyns Assesment): test that measures basic literacy skills. EGMA (Early Grade Readyns Assesment): test that measures basic skills for calculation and mathematics.

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