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## SÃO PAULO EDUCATION MEDIA CENTER REMOTE TEACHING MEDIATED BY NETWORK TECHNOLOGY AND THE IMPACT ON LEARNING

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**Abstract:** This article is the result of a bibliographic and documentary study on the context in which the launch of the Education Media Center in São Paulo took place, and on the impact that remote teaching has on students' learning, assessments and school attendance. Several academic works and legislation that supports the use of technologies as an ally of learning were used to support the research. Which showed that remote teaching without mandatory face-to-face classes causes demotivation, delays in learning and a tendency to abandon studies, both in countries considered developed and in those still developing. After reflection and analysis of the findings, it is possible to affirm that the presence of students in schools is fundamental for their cognitive and socio-emotional development. Schools have the great challenge of ensuring that students make progress in their learning and improve their assessment results. To this end, there is a need for professionals committed to teaching how to study using the tools and technological resources so recommended in educational legislation.

**Keywords:** Media Centers; Digital Network Technologies; Remote Teaching; School Dropout; Learning Assessment.

## INTRODUCTION

Education mediated by networked digital technologies has increased in Brazil and around the world, although there has been a lot of resistance in previous years regarding the use of cell phones in schools, on the part of education professionals. So much so that there were several laws in Brazil prohibiting the use of cell phones and other electronic devices, such as MP3 players and video games in schools, due to the fact that students used the equipment for purposes other than academics.

In February 2020, a pandemic caused by a deadly coronavirus for some of the infected people emerged in São Paulo, which forced people to stay away from physical schools and any type of in-person gathering. A fact that surprised all public and private educational bodies and required rapid adaptation to remote teaching through the use of digital technology. The education departments, in order to reduce learning gaps, committed themselves to solving the problem by introducing classes transmitted via virtual platforms. However, it is known that some of the students did not have cell phones, but wanted to have one, others had the device, but did not know how to use it to study, others knew how to use it, but did not want to, others did not know how to use it and did not want to, others had the device, but they did not have access to the world wide web (internet).

This study is justified by the changes that education has undergone in recent years, with the prohibition and then authorization of the use of cell phones in the classroom, by legislation, with the INOVA movement in São Paulo, expanding the course load of the curriculum to from 2020, with the re-elaboration of the Common National Curricular Base – BNCC, with the reform of secondary education and greater openness to hybrid (mixed) education. The objectives of the research were to verify in what context the launch of the Media Center educational platform took place in São Paulo. And what impact does the use of these network learning platforms, without physical contact between teachers and students, have on the development of learning?

The methodology of this work occurred through bibliographical and documentary research (LIMA and MIOTO, 2007) on teaching through virtual platforms and its implications for the evolution of learning and school attendance. Exploratory readings and

summaries of academic works and legislation that support the use of technologies as an ally of learning were carried out on websites of Brazilian governments, UNESCO, World Bank Group, magazines publishing scientific articles, platforms publishing scientific works such as Google Scholar with emphasis on ENGZELL et al., 2021, LEMANN, 2021 and LICHAND et al., 2021.

The work was divided into 6 chapters: 1 Introduction; 2 Methodology; 3 São Paulo Media Center and the Impact of Remote Learning on Assessments and School Attendance in São Paulo State Schools; 4 Results; 5 Analysis and Discussion; 6 Final Considerations.

After the theoretical foundation on the topic, an analytical reflection and discussion was carried out on the results of the impact of remote teaching on learning, school attendance and the Assessments of Learning in Process (AAPs) of students from state schools in São Paulo. After analyzing the findings, it can be stated that the physical presence of students at school, learning from each other, exercising empathy and collaboration is extremely important for the cognitive and socio-emotional development of each learner, and there is a great need for professionals who teach how to study using technological resources already enshrined in educational legislation.

## **METHODOLOGY**

The methodology of this work occurred through bibliographical and documentary research (LIMA and MIOTO, 2007) using a notebook with internet access, on teaching through virtual platforms and their implications for the evolution of learning. Exploratory readings and summaries of various academic works were carried out, of the legislation that supports the use of technologies as an ally of learning, and of studies on the

impact of remote teaching on the evolution of learning and school attendance, on websites of Brazilian governments, UNESCO, Grupo World Bank, journals for publishing scientific articles, platforms for publishing scientific works such as Google Scholar with emphasis on ENGZELL et al., 2021, LEMANN, 2021 and LICHAND et al., 2021.

After the theoretical foundation on the topic, the results were described and an analytical reflection and discussion on the results of the impact of remote teaching on learning, school attendance and the Assessments of Learning in Process (AAPs) of students from state schools in São Paulo.

## **SÃO PAULO MEDIA CENTER AND THE IMPACT OF REMOTE TEACHING ON ASSESSMENTS AND ATTENDANCE IN STATE SCHOOLS IN SÃO PAULO**

The Media Center (CMSP) of the São Paulo State Department of Education (SEDUC/SP) established by Decree 64,982 of 05/15/2020 is a platform composed of two open digital channels: ``TV Educação`` and TV Univesp, through an application, and the social networks Facebook and You Tube, which allow teachers, managers, students and their families to access basic education content. All content broadcast live on the app and on social networks for students is replayed on open TV on the aforementioned channels. Furthermore, all content broadcast live by CMSP for students and professionals is stored with public visibility in a large repository on the CMSP platform and on You Tube for consultation at any time. The CMSP also aims to contribute to the training of all professionals in the network, expand and encourage the possibilities and horizons of teaching and learning in traditional education, digital culture and allow greater connection between network members through the

mediation of technology, innovation and quality improvement. (CMSP).

Although it was foreseen in the SEDUC/SP plans since the beginning of 2019, the CMSP emerged in April 2020, in the context of the spread of Covid-19, which made this connection more relevant, considering the need to keep teachers and students at home carrying out non-face-to-face activities during 2020 and most of the months of 2021, as per the decision of the State Education Council CEE177/2020, to prevent the spread of the disease.

At CMSP, students also have the opportunity to participate in live class chat and carry out the activities proposed in class asynchronously, on the same platform. Traditional classroom teachers were also able to interact with students synchronously and asynchronously in the application, and through checking such activities carried out or not carried out, they could assign grades and attendance to students. The data and graphs of the tasks performed by students are stored on another platform, the SED – Digital School Secretariat for teachers of the assigned classes to fill out their digital diaries and approve students.

The abrupt suspension of face-to-face classes due to DECREE 64,864 of 03/16/2020, to contain the spread of the COVID-19 pandemic, forced schools to search for varied teaching strategies, and revealed the existing inequalities between teachers and students in relation to access to Networked Digital Technologies. The lack of structure such as digital equipment to develop and/or participate in online and remote classes was one of the biggest challenges for people to quickly adapt to a new work and study format with live or repeated virtual classes.

With the dedication of teachers, parents and students who had a computer, notebook or cell phone with internet at home, students'

learning can continue to happen, even if at a slower pace. However, the reality of a large number of students was different, as, even with an internet device, they did not have the necessary skills to use technological devices to follow and learn remotely and even to connect and interact with teachers. via WhatsApp. Thus, schools also chose to create printed activities for parents and students to look for at school, and based on the analysis of the activities carried out, teachers could have another criterion to evaluate learning.

When classes returned in 2021 with the permission of up to 35% of students in the classes, (Decree, number: 65,384 of 17/12/2020), schools had great difficulties in getting students to attend school at least once a week and the active search carried out by telephone, WhatsApp and e-mail, both for those who carried out online activities and those who did not, did not have a satisfactory effect in terms of increasing student attendance at CMSP and/or schools.

It is believed that the poor adherence of students to remote teaching was because, despite the use of cell phones in the classroom being permitted by law number: 16,567 on 11/06/2017 (SÃO PAULO, 2017), there was no training nor pedagogical practices that used cell phones as a learning resource in the years before schools closed for Covid-19 prevention measures. Furthermore, for a decade the use of cell phones in the classroom was prohibited by law number: 12,730 on 10/11/2007 (SÃO PAULO, 2007), and even the use of other technological resources, such as a multimedia kit with or without access to internet, was scarce due to the lack of stimuli, incentives and investments on the part of governments, hence the resistance of many teachers to using technology in their classes, until 2020. When the emergence of online and remote teaching emerged in 2020, due to Due to the Covid-19 pandemic, few teachers had the necessary

skills and equipment to teach their classes via video calls.

If, on the one hand, technology allows agility, innovation and development, on the other, it profoundly changes relationships and accentuates inequalities (UNESCO, 2019).

In view of this, in 2020 the São Paulo government made resources available for teachers to buy their notebooks, and in the 1st half of 2021 it donated cell phone chips with paid data packages to teachers and students in need (SEDUC/SP, 2020; SEDUC/SP, 2021).

Despite investments of 700 million reais from the Direct Money at School Program – PDDE in state schools in São Paulo, in 2020, to purchase equipment and maintain schools and serve the most vulnerable students in the education network (SEDUC/SP, 2020a), the absence of teachers and students from face-to-face classes in schools due to the pandemic caused a regression in the Portuguese and mathematics proficiency levels of students in state schools in São Paulo, according to data from the assessment carried out by the Center for Public Policies and Education Assessment at *Universidade Federal de Juiz de Fora* (CAEd/UFJF) with 21,000 students from SEDUC/SP. (SEDUC/SP, 2021b, 2021c).

## RESULTS

SEDUC/SP, which was already facing problems combating school dropout rates and improving the educational indices of the Basic Education Assessment System - SAEB and the Basic Education Development Index - IDEB, although education in state schools in São Paulo has obtained a greater increase in rates from 2017 to 2019, according to the (CAEd/UFJF) study carried out at the beginning of 2021, suffered a drop and the biggest differences in the proficiency scale was found in the 5th year of elementary school, with a drop in mathematics of 46% in SAEB, and in Portuguese, a drop of 29%.

In the 9th year, a drop of 11.2% in Portuguese, and 13.8% in mathematics, and in the 3rd year of high school, a drop of 10.9% in Portuguese and 18.2% in mathematics.

Besides, according to this study, during 2020 there were 35% school dropouts (SEDUC/SP, 2021b/c).

A survey by Data Folha at the request of *Fundação Lemann*, Itaú Social and the Inter-American Development Bank – IDB, shows a worrying reality from the perspectives of families participating in the quantitative research carried out in all regions of Brazil between April 22nd and May 21st 2021. For families, 40% of students are unmotivated, are not progressing in their learning and show signs of dropping out of school. For families with children enrolled in the 1st, 2nd and 3rd years of elementary school, 88% are in the literacy process, with 51% of these remaining at the same learning stage and 22% unlearning what they already knew (LEMANN, 2021).

Researchers from the University of Zurich, Switzerland, conducted a survey on attendance, report card grades, and standardized tests in Portuguese and mathematics in the four months of 2019 and 2020, and found that the risk of dropping out in state schools in São Paulo increased by 365% in 2020, with remote learning in certain locations where there was a high incidence of the disease. Most can be directly attributed to the absence of in-person classes across the state. The researchers estimate that the risk of dropping out of school increased by no less than 247%, even at low levels of the distribution of per capita Covid-19 cases. In the standardized Learning Assessments in Process (AAPs) tests, the average score decreased by 0.32 per standard deviation, as if what was learned was just 27.5% of the in-person equivalent under remote learning. Learning losses have not systematically increased with local disease activity, proving that they are in fact the result



of remote learning, rather than a consequence of other economic or health impacts from Covid-19. And when schools were allowed to reopen for in-person classes, high school students' scores increased by 20% compared to the poverty control group (LICHAND et al., 2021).

The results also showed that the social costs of keeping schools closed during the pandemic are extremely high. Although the learning losses documented in the São Paulo study are as high as those documented in developed countries, the increased risk of school dropout is exclusive to developing countries. Such impacts can have lasting effects on employment, productivity and poverty levels (LICHAND et al, 2021).

In the view of Lichand et al., (2021), the reopening of schools under safe prevention protocols can prevent these social costs from growing even further. The authors also warn against enthusiasm for distance learning in primary and secondary education outside the context of Covid-19.

In São Paulo, even with the distribution of cell phone chips with internet by the state to students, the performance of online activities and attendance in the physical classroom remained very low.

For August 2021, with the majority of the population of São Paulo vaccinated with the 1st dose of the vaccine and 15% of those with the complete vaccination schedule, the government of São Paulo authorized the return to face-to-face classes, for 100% of students, using the CMSP as a complement to improve learning, however, attendance is still not mandatory, as the target audience under 18 is expected to be vaccinated from mid-September (SÃO PAULO, 2021).

## ANALYSIS AND DISCUSSION

A fact that must be considered in relation to the high school dropout rate is that before the pandemic, Guardianship Councils and/or the Public Prosecutor's Office were notified regarding the low attendance of enrolled students, and fathers, mothers or guardians feared reprisals if they did not force their children to be present in schools. With the decrees resulting from the pandemic, which made school attendance non-mandatory, school dropout rates reached catastrophic levels.

It is not technology that causes learning gaps, but rather non-adherence to its use. Although, face-to-face classes with physical contact are extremely necessary, especially for the infant and elementary stages I, the most important phases of human development, as learning to socialize, read and write demands interaction with affection, human relationships that consider feelings and make common.

It is worth mentioning that the Netherlands, a country that went through a relatively short period without in-person classes (8 weeks), and has an equitable school financing system and the highest broadband access rate in the world, had a learning loss of 3 points, when the results of the evaluations were compared with the previous 3 years.

The loss was equivalent to 1/5 of the school year, the same period in which schools remained closed. Losses were up to 60% greater in homes of less educated people and with less money. The results of this research remain robust when comparing students from several families within the same school. The findings revealed that students made little or no progress while learning at home, and suggested even greater losses in countries with weaker infrastructure or longer school closures (ENGZELL et al., 2021).

This way, the loss of learning is due to the

lack of access to the use of technologies, which occurs a lot in the poorest layers, or to the aversion to the use of such tools on the part of those who have them, in this case the wealthier layers, as the Netherlands is considered a rich and developed country.

Seymour Papert, mathematician, concerned with intellectual development in less developed countries, pioneer of artificial intelligence, a critic of traditional learning, working partner of Jean Piaget and precursor of constructionist learning, already in 1967 defended one computer per child, as he believed in importance of the use of technologies by students as an auxiliary means in the process of building their own knowledge (learning by doing), and indicated that children must use such equipment as instruments to facilitate learning, to improve creativity, innovation and implement computational thinking (ELLISON, 2020; MORABITO, 2008).

In the view of many people, including non-traditional educators, the adoption of remote classes is an experience doomed to failure, because it encourages self-learning imposed by the lack of face-to-face contact. But according to what has been happening in education, for example in São Paulo with the INOVA movement, which in 2019 implemented three more subjects in the curriculum, Life Project, Electives and Technology and Innovation, both in primary and secondary education, self-learning and autonomy are socio-emotional skills that must be developed together with cognitive skills. What cannot happen is that education remains in this remote teaching format forever, without any physical contact between students and educators at school, at least on part of the days of the week, as this increasingly creates a distance between people, and Socialization is part of human development.

Vygotsky et al (1988), author of the sociointeractionist conception, contributed

to learning theories by highlighting the importance of social interaction in the educational process, through exchanges between people and the object of study.

From this perspective, the importance of the social environment of the school as a trainer of psychic functions is verified, in which people's development occurs through relationships, active appropriation and exchanges of knowledge existing in society. But if students do not attend school at least part of the week, instead of learning to: know; to do; live together; being, which are the pillars for 21st century education, according to Jacques Delors (1998), can become antisocial, and this represents a problem for society, when hopefully trying to educate for peace.

Adherence to the use of network technologies, and the tools used in the virtual learning environment, in addition to providing more autonomy, stimulating the ability to communicate, collaboration and protagonism of those who teach and those who learn, and favor the construction of knowledge beyond of conventional methods with textbooks, blackboards and chalk, allow collaborative work that highlights Vygotsky's vision of interaction between people with different levels of experience, and who belong to different cultural niches, and expand the possibilities of learning, deepening content, the development of both cognitive and socio-emotional skills, through access to different materials in different times and spaces.

Among the recommendations contained in the World Bank report "Act now to protect the human capital of our children", to combat the worst educational crisis ever experienced by humanity, is the use of technologies that can promote adaptive learning and enhance educational solutions. According to the report, although educational systems in Latin America and the Caribbean face an unprecedented challenge, this difficult

situation opens up many opportunities for reconstruction to make educational systems better, effective, equitable and resilient (WORLD BANK, 2021).

Therefore, remote teaching hastily implemented in São Paulo state education with the help of the Media Center, may not be the best way to conduct learning, but it is a beginning of adaptation to hybrid teaching, and a practice that enhances the learning that passes to be practiced more in 2022, for several reasons, including the implementation of the New High School.

## **FINAL CONSIDERATIONS**

This research met its objectives in a completely satisfactory manner. After reflecting on the results and analyses, it is necessary to consider that technology will not take the place of teachers, however, only teachers who know how to teach students how to study/learn, using technology, will survive. There are many ways to learn, and not everything needs to be taught, but there are actually practices that need to be taught, as not everyone learns a certain thing or content alone, and studying is one of them. You cannot be completely dependent on technology, but it is also not wise to disregard it.

This statement is also valid for other professionals who are resistant to the use of technology, as non-acceptance causes them to lag behind other professionals, including those in the same class or category. Hence

the importance of learning to live with all this technological diversity, and including it in everyday life, before even entering the market or world of work.

Remembering the doctor and educator Maria Montessori (1870 to 1952), apud Staccioli (2018), with one of her most emblematic phrases, in defense of self-education and against the role of teachers as the only source of knowledge: “Help me do it alone (The)”. Educators are faced with a great challenge, which is to awaken curiosity and desire to learn. The Life Project discipline at SEDUC/SP contributes greatly to awakening the interest, autonomy and protagonism of students. And technology, the tools that people invent, serve to make people’s lives easier, including those who teach and those who learn.

After reflection and analysis of the findings, it can be stated that the physical presence of students at school, learning from each other, exercising empathy and collaboration is extremely important for the cognitive and socio-emotional development of each learner. Therefore, there is a great need for professionals who teach how to study using technological resources already enshrined in educational legislation.

By knowing this, is the São Paulo state school prepared for the return of students to the classroom, after the pandemic, overcoming losses and achieving progress in learning rates? If not, what must the school do to succeed in its social function?



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