

# Chapter 68

## SAEB 2021 and the teaching-learning process through ICTs – a positive dialogue in the pandemic context

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### ABSTRACT

This article is situated in the context of the practices developed during the pandemic period, when there was a closure of schools in the face-to-face mode and a forced and urgent migration to the remote mode, all

over the world. Through the analysis of the data offered by the SAEB before 2021 and the updated data, it is clear that the effort made by the teachers and managers of Colégio Brigadeiro Newton Braga (CBNB) obtained positive results, although recognizing a series of difficulties, among them that of involving as many students as possible with remote teaching, in the initial period of the pandemic. The theoretical and methodological foundation is mirrored in studies by Benjamin (1996), Certeau (1994), Bonamino (2016), Muller (2018), among others. The results indicate that the effort of CBNB teachers and managers to migrate to remote teaching as soon as possible had positive effects. However, we identified that there is still a long way to go in search of a better didactic use of network environments and appropriate use of digital technologies within the institution.

**Keywords:** pandemic contexto, pedagogical practice, SAEB data

## 1 INTRODUCTION

The COVID-19 pandemic that devastated the whole world brought remote teaching as one of the emergencies. This need was present in each school unit, bringing to managers, teachers and the entire school community the need to approach technologies in a hurried way and with immediate results.

Each school unit had to adapt to the new moment, looking for possibilities to continue working pedagogically with students, but remotely. It was necessary for both managers and teachers to seek other ways to continue developing the pedagogical work that until then had taken place in a face-to-face format.

At Colégio Brigadeiro Newton Braga, this immediate technological adjustment was no different from other schools. The pandemic brought a series of difficulties so that classes could continue. But how can teachers, students, managers and guardians be prepared overnight? Endless organization and learning procedures were needed, focused on the technological field, which could contribute to everyone.

It is necessary to highlight the commitment of the management in training and courses so that the teachers had access to the platforms that would support their classes. In addition to the contributions of the Parents Association together with managers and teachers in the effort to ensure that all students have access to remote classes. Teachers had to reinvent themselves to continue teaching remotely.

Even with all our efforts, we were unable to reach all students, but from a survey organized by the school itself, it was possible to see that most students at Colégio Brigadeiro Newton Braga attended remote classes during the pandemic period.

The data presented by the Basic School Assessment System (SAEB, 2021) proved that everyone's commitment during the pandemic period contributed to our students' learning rates continuing to grow.

## **2 THE BASIC EDUCATION EVALUATION SYSTEM (SAEB): A BIT OF HISTORY**

Quem escuta uma história está em companhia do narrador, mesmo quem a lê partilha dessa companhia.  
Benjamin

According to data provided by the National Institute of Educational Studies and Research Anísio Teixeira (INEP), the first edition of the SAEB (Basic Education Assessment System) took place in 1990, covering contents of Mathematics, Natural Sciences, Portuguese Language and Writing, with the aim of target audience students in the 1st, 3rd, 5th and 7th grades of Elementary School. Coelho (2008) informs that:

[...] it was in the mid-1990s that the evaluation of basic education was implemented and was consolidated by the external evaluation of the school by Saeb – Basic Education Evaluation System, based on learning results measured by quantitative resources (COELHO, 2008, p. 230).

The second edition took place in 1993 and it is observed that only the questionnaires for teachers and directors underwent changes and privileged the profile and practice of teachers and managers, including some items that were linked to their training, ways of accessing the position and situation career function.

In 1995, the SAEB methodology was modified, as data collection began through questionnaires, with the inclusion of private schools also occurring. The target audience were students in the 4th and 8th grades of elementary school and the 3rd year of high school, where the areas of mathematics and Portuguese were evaluated. Klein (2009) presents the change that occurred in the methodology used.

[...] The TRI shifts the focus from the test as a whole to the analysis of each item. IRT is a set of mathematical models where the probability of responding to an item is modeled as a function of the student's proficiency (skill) and parameters that express certain properties of the items. The higher the student's proficiency, the greater the probability of him getting the item right (KLEIN, 2009, p. 127).

In the Item Response Theory (IRT), each test item is considered as a whole, and when calculating the score “the consistency of the response according to the degree of difficulty of each question” (BRASIL, 2020).

In 1997, other changes were present, as in addition to the subjects of Portuguese Language and Mathematics, Sciences (physics, chemistry and biology) were also part of the assessment, where contents related to skills and competences intended for each grade and discipline.

The 1999 SAEB edition took place along the same lines as the previous edition. It was only in 2001 that SAEB began to apply tests with the subjects of Portuguese Language and Mathematics. According to Bonamino (2016), from this 6th edition onwards, a discourse that sought new perspectives began to take place, and thus other theoretical and methodological assumptions guided the re-elaboration of the instruments, causing the 2003 tests to follow the same pattern as the previous one.

For Bonamino (2016), from the second half of the 2000s, there is an abandonment of the sociological perspective to emphasize a cognitive perspective, changing its initial direction, failing to consider the connection between the two perspectives.

In 2005, through Ordinance No. 931 of March 21, 2005, this assessment system was restructured, establishing that the SAEB would be composed of two assessments: the National Assessment of Basic Education (ANEB) and the Assessment of School Performance ( Anresc) or Prova Brasil (BRASIL, INEP, 2020).

The Prova Brasil (Anresc) presented significant changes since it started to occur in a census form for students in the 4th and 8th grades (today 5th and 9th grades) of public and private schools that had at least 30 students enrolled in these stages of schooling.

Freitas (2012) clarifies that behind a discourse of census evaluation there is an intention of control and accountability, causing a reversal of roles since the school with this type of system is exposed and penalized for educational quality. The sampling system could help guide public policies, but without putting pressure on each evaluated school unit.

Even with the same test format as the previous version, in 2007 the IDEB (Basic Education Development Index) was created, combining “average student performance, approval, failure and dropout rates, in addition to calculating the IDEB (BRASIL, INEP, 2020).

In 2009 and 2011, the same format as the previous version was used, with the implementation of the ANA (National Literacy Assessment) only occurring in 2013 through Ordinance No. 482 of June 7, 2013, of the MEC, involving an assessment for measure literacy, as well as an experimental science assessment for 9th graders.

In 2015, when the results were returned, the “Pedagogical Feedback Platform” was organized, where the items included in the Prova Brasil would be made available with comments from specialists in the area. And, in the 2017 edition, the census evaluation also took place with the 3rd year of high school.

In the 2019 edition, it was necessary to adapt to the National Common Curricular Base (BNCC) where items were developed for the tests of students in the 2nd and 9th years of Elementary School, in the Portuguese Language and Mathematics subjects, including a sample test of Sciences .

That same year, the ANA, Anresc and Aneb assessments were renamed SAEB and the Literacy assessment began with the 2nd year of Fundamental. This restructuring also extended to a sample in Early Childhood Education, which INEP calls the “pilot study character” that occurs with the application of questionnaires to principals, teachers and municipal and state education secretaries.

The most recent version of the 2021 SAEB took place in the midst of the COVID-19 pandemic, being applied in person, where schools were guided regarding safety protocols. The students responded to tests in Portuguese Language and Mathematics and, on a sample basis, tests in Human and Natural Sciences for 9th grade students. In Early Childhood Education, the same format as the previous version, with the application of questionnaires.

### **3 INITIAL ACTIONS AT COLÉGIO BRIGADEIRO NEWTON BRAGA**

O cotidiano se inventa com mil maneiras de caças não autorizadas  
Michel de Certeau

In March 2020, educational institutions had to suspend all face-to-face classes, in accordance with Ordinance No. 188/GM/MS. It can be said that it was the beginning of chaos in the teaching area. We still didn't have a real sense of what was plaguing us, we didn't know how long we would stay with classes suspended and what we would do to soften the impact on the teaching-learning process. Following the closure on March 18, 2020, the Head of the Teaching Division, together with the head of the Technical Planning and Evaluation Subsection (STPA), and the person responsible for the Information Technology (IT) part of CBNB met to define the first steps to be followed by everyone in the school.

The fear about what would happen plagued us, however, the certainty of returning to online teaching with technology in tests drove us because this online work had already been developed by two teachers from the school, for some time now, being known as Newton Technology Braga (TENB). This technology was intended to be the platform for posting didactic material for the Technical Nursing course at our school (CTENF). This software did not come close to the real needs, but it would be the first step to post the didactic material so that the students would not lose contact with teaching.

The hard disk space used by the platform would not be enough to start the work, that's when the idea of using the ZOOM collaborative platform to teach classes came up, while we tried to expand the hard disk space on the CBNB server.

This problem should be resolved so that teaching material could be consulted, as we would no longer have contact with students and consulting books and notebooks would be unfeasible, due to social

distancing, which was necessary at that time. The “how” to do it was initially resolved. The “what” and “when” were to be defined.

The first week of isolation took place under heavy pressure and without much practical evolution, but the remote teaching scenario was already taking shape. The daily and online meetings between the various CBNB collaborators took place with the participation of the most diverse sectors of the administration, in order to resolve this impasse, as the logistical problems multiplied at an almost exponential rate.

It was decided that we would reach the greatest possible number of students in the remote modality. This action of locating and grouping in virtual rooms would be coordinated by the Guidance and Pedagogical Support Service (SOAP) of CBNB. Students who could not follow remote teaching would be treated individually later, as we identified that it would not be possible to reach 100% of students due to the socioeconomic level of our student school community, which is concentrated in the popular classes.

We would not open the school to receive students without internet access, as this was not provided for by law. This service would be provided to professors and collaborators who could not carry out their activities online from their homes. It was not necessary to have this service at school, since adherence to remote work was massive in the teaching class.

Many professors did not have the technical knowledge to operate the platform. So, it was necessary to train the CBNB IT team to provide support. The professionals in this area no longer had working hours, but the spirit of cooperation and professionalism surpassed the needs at that time.

A re-planning of the class schedule and the program content to be taught was also started, as it had been identified that it would not be enough to simply start teaching the same content scheduled for the school year and we would not even be able to meet the same goal of classes.

At the end of a week of isolation, teachers were preparing to use ZOOM and trying to be ready for remote teaching. And in this context of searching for remote teaching adjustments, even if the actions had not yet been fully outlined, the entire staff of the school was adjusting to remote work to work with students.

#### **4 THE FUNDAMENTAL ROLE OF ACTORS OUTSIDE THE CBNB**

Defining CBNB as “the factory floor” and wanting to understand how managers and teachers would behave in the face of challenges, two other aspects emerged: the regrouping of students and pedagogical planning so that activities could take place remotely.

For Benjamin (1994)

Half the art of storytelling is avoiding explanations. The extraordinary and the miraculous are narrated with the greatest accuracy, but the psychological context of the action is not imposed on the reader. He is free to interpret the story as he wishes, and with that the narrated episode reaches an amplitude that does not exist in information (BENJAMIN, 1994, p. 203).

We knew that the first actions would only serve to start school work and that almost daily replanning would become imperative. Two partners proved to be fundamental to success: the Aeronautics Teaching Board (DIRENS) and the CBNB Parents Association. The first is the central teaching body within the scope of the FAB, which complies with the Air Force Education Law (BRASIL, 2011). The CBNB is directly subordinated to it, through the Division of Assistance Schools (DEA) in accordance with RICA 21-304 of May 16, 2018 (Internal Regulations for Assistance Schools), through this Board that is thought of in a “macro” way teaching in the middle of the FAB.

Once aware of our needs, the DEA began to coordinate actions, issuing guidelines based on legislation issued by the Ministry of Education and Culture (MEC), Ministry of Health (MS), National Council of Education (CNE) and other bodies. This intermediation relieved the CBNB administration of the burden of having to verify the legality of the planned facts, since compliance with the directives issued automatically implied the execution of actions supported by legality.

In the course of the first few days, DIRENS became aware of the difficulties arising from the ZOOM platform and purchased subscriptions for a new platform, WEBEX, for FAB educational institutions, with more resources as it is not an open software. Teaching at the FAB needed to continue as a whole.

All training and improvement schools needed to resume their activities. The approximate total of students with their most diverse needs came up to around 5,000. WEBEX would not be able to meet all the needs of educational institutions. Once again, the Board of Education (DIRENS) acted and provided us with 2500 signatures of the collaborative platform MS-TEAMS, according to letter 52/SDGE/2214. And in this context, it was necessary for training to take place among all.

CBNB's IT staff carried out the initial training and began to act once again as knowledge disseminators, as clarified by MULLER, (2018);

The internet affects teaching practices in three different ways: it enables distance communication (in real time or not); provides technical tools that facilitate the production of texts; opens access to a potentially unlimited bank of information, available on the world wide web (www). As expected, this set of possibilities created new literate practices and also reconfigured and re-signified existing practices. (MULLER, 2018, p 16)

Another prominent actor in this odyssey of teaching restructuring at CBNB was the Parents Association. The closest and most active members in the school environment managed to establish themselves as an arm that reached the most distant families in our community. They achieved what the institution could not have achieved without support. Residents of regions where the State has not yet been present, served as a bridge to the location of other members who, after the fateful March 13th, simply remained incommunicado. At that time, it was the most we could do to guarantee the right to education, in accordance with CFRB 88, Cap III, Section I, Art. 205.

The following worksheet depicts the average frequency reached during the pandemic period. Data were extracted from the daily reports sent to DIRENS, from June 16 to 19, 2020 and can be extrapolated to



the entire period in which we remained in the remote teaching modality, as weekly variations were less than 1%.

Table with information on the Average Attendance of students from Elementary to High School in the period from 06/16 to 06/19/2020 on CBNB.

Total de alunos: 1029		16/06/20	17/06/20	18/06/20	19/06/20	Total de alunos no ano cursado	Frequência por ano cursado	Frequência por segmento
EF-1	1 ano	19	19	19	19	21	90,48%	97,71%
	2 ano	26	26	26	26	26	100,00%	
	3 ano	30	30	30	30	30	100,00%	
	4 ano	52	50	50	52	52	98,08%	
	5 ano	60	60	60	60	60	100,00%	
EF-2	6 ano	64	64	66	73	90	74,17%	63,55%
	7 ano	85	48	66	80	110	63,41%	
	8 ano	82	73	75	84	112	70,09%	
	9 ano	52	53	47	77	123	46,54%	
EM	1 ano	74	46	40	64	155	36,13%	55,17%
	2 ano	81	73	73	92	129	61,82%	
	3 ano	79	82	76	90	121	67,56%	

Source: Table organized by authors

Subtitle: total number of students  
 Total students in the year studied  
 Frequency per year studied  
 Frequency per segment

This process of locating and regrouping online by SOAP and the Parents' Association took a few days, having reached 96.02% of enrolled students. There is no formal record for this data, but it was extracted taking into account that 96.02% of the 1029 students accessed ZOOM, WEBEX and MS-TEAMS at least once during 2020.

Two months after the WHO pandemic decree, CBNB had redistributed class schedules, redesigned annual calendar, active collaborative platform, active support and attendance control team, team of inspectors to control virtual rooms, remote service to parents and students with support for educational guidance and evaluation of remote teaching of pedagogical activities.

In this way, in May 2020, just over two months after the in-person removal from education was decreed, we inaugurated a new era at CBNB. Undoubtedly a turning point in the parabolic curve of current teaching.

## 5 DIALOGUE WITH EXTERNAL INSTITUTIONS

The narrative made with the author's emotion can take on the air of a short story by Monteiro Lobato; however, it was not in this simple, clear and thornless way that the process developed.

Members of the CBNB Teaching Division (DE) were pushed to the limit of their tenacity. Still in March, the work routine began early in the morning with meetings scheduled with DIRENS to deal with the most diverse subjects and became almost endless going into lunchtime.

In the afternoon, the pedagogical planning took on the role of the scene, as the number of demands was large. At the end of the day, there was what we called a “sunset meeting” between the members of the Technical Planning and Evaluation Subsection (STPA) and others who were needed.

At the same time, families had their demands and, as a consequence, the points of disagreement began to be present. There was a false impression that we were not moving towards success, as the benchmark did not exist.

Two factors were preponderant for the correct interpretation of the actions in a positive way. The first of these was a meeting with the Public Ministry (MP), where CBNB was praised for its proactive stance in offering remote teaching within its possibilities. The other, after reducing the levels of contagion, we organized a delegation from the school itself to visit and dialogue with another federal institution of basic education.

On this occasion, a comparison criterion was inevitably formed with another teaching organization that was facing the same problems that we were having with the pandemic, as we were told and thus, it was possible to verify that the actions applied within the scope of CBNB, aiming at reestablishment of pedagogical actions, were progressing in a satisfactory perspective, demonstrating that the results would not take long to happen.

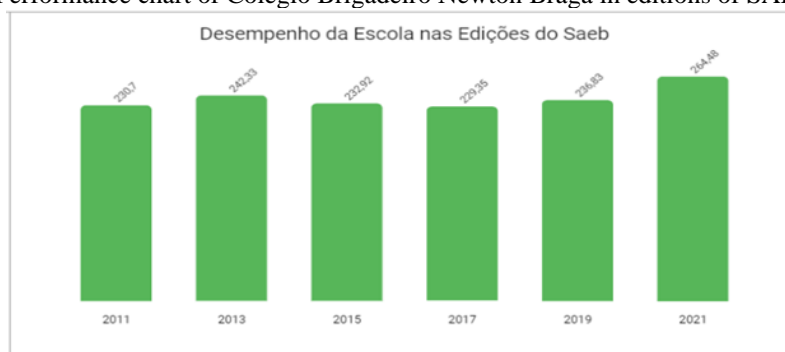
## 6 SAEB 2021: DIALOGUING WITH DATA AND DISCUSSING A NEW SCHOOL

O dom de despertar no passado as centelhas da esperança é privilégio exclusivo do historiador.  
Benjamin

Performance evaluation in school management can be measured in several ways. However, how to measure the performance of an institution in a time of pandemic, which had not occurred in the world for 100 years? One of the means found by CBNB to self-evaluate was to have stipulated criteria, goals to be achieved and comparison between elements of the same nature to diagnose a variation between data already measured.

Even though it is a large-scale assessment, the data we obtained through SAEB 2021 portrays part of this framework of information about the performance of CBNB students during the pandemic.

Performance chart of Colégio Brigadeiro Newton Braga in editions of SAEB



Source: SAEB / INEP



There is a considerable increase of 27.65 points between 2019 and 2021 in the global average, corresponding to an increase of 11.67% in relation to the last evaluation. It is also noted that there has been a growth in the performance of CBNB students since 2017.

Although the data indicate that there was an efficient action for success to be achieved, the steps that were taken opened up new perspectives of a dialogue that needs to be constantly revisited, such as work fatigue caused by remote teaching, where the classroom is mixed with the family, origin of a high level of stress; the unpreparedness of teachers to deal with Information and Communication Technology (ICT), the lack of student maturity to transit in a virtual evaluation environment (AVA) and the social limit of some families who could not fully follow remote teaching.

And in this context, it is understood that every action has an intrinsic component of friction that delays the maturation of the result or has an excluding character of a certain group, but it cannot be the impediment for actions aimed at the common good not to be taken by the administration.

## **7 FINAL CONSIDERATIONS**

Despite humanity having lived a dark experience during the first two years of the pandemic, lessons need to be learned and, above all, experienced with the aim of professional improvement.

The quick planning aimed at remote teaching allowed the Teaching Division with teachers to adjust and start online classes as soon as possible with teachers and their students. The actions of the Board of Education (DIRENS) as a directing body of pedagogical activities and as a filter to verify compliance with the legality of actions, allowed CBNB managers and teachers to act more quickly in order to reach the largest possible number of students.

The partnership established with the School's Parents' Association was fundamental because it contributed to the work of the Pedagogical Guidance and Support Service (SOAP) being expanded with this important support from parents. The effective control of the activities that were carried out through the MS-TEAMS platform and the daily reports sent to the Education Board (DIRENS) were the administrative and legal basis that enabled the CBNB Director to receive praise in a public hearing, before the Public Ministry.

The posting of didactic material, as well as the evaluation process of the online activities provided through the MS-TEAMS platform, kept the flame of “school” burning in the student's social life, even if the activities were carried out without the effective supervision of the teachers.

The legacy left by the acquisition of MS-TEAMS as a teaching support platform lasts until today with the implementation of a reading project, another to support mathematics and another to train teachers.

SAEB 2021 data crowned the actions of actors participating in the teaching-learning process within CBNB. However, there is still a long way to go, such as allocating internal resources that are available to the entire teaching, student and administrative community, in order to make feasible what Muller (2018) highlights about learning through the computer.

The use of technology for quality education is not virtual, it is real, but its full potential will only be explored with a lot of research, work and innovations in teaching didactics. (MULLER, 2018, p. 107).

Currently, we are closer to the sanitary normality experienced in the period prior to the pandemic and, as a consequence, the way of teaching and learning tends to be repeated similarly to that applied at that time, given the identity of the institution. However, in the midst of all the challenges experienced, we cannot let that happen, as it would be a setback.

The data offered by SAEB brought us a positive look at the intense work that was carried out, in the context of the pandemic. Despite the difficulties we had during this period, the search for quality work was pursued by all those who are working in this educational institution. Therefore, we feel that the effort employed was not in vain.

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