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THE MATHEMATICS TEACHER'S VIEW ON SAEB AND THE ORGANIZATION OF PEDAGOGICAL WORK

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Abstract: This is a qualitative research study, whose objective was to identify elements that point to changes in the organization of pedagogical work due to the application of the Saeb cognitive test in the mathematics subject of the 9th grade of elementary school. The questionnaire with open questions was answered by a group of 31 math teachers from the final years of elementary school from four Regional Teaching Coordinations of the Federal District. The main results showed that 55% of the teachers use the Saeb's results as the focus of their pedagogical work; 45% of the teachers are unaware of the documents that deal with the Saeb; 40% of the teachers focus their pedagogical work on the test; 59% of the teachers did not know about the Plataforma Devolutivas Pedagógicas. We conclude that the use of the Saeb results by schools is not to shape their educational action, even though the expansion of its use embraces other purposes.
Keywords: Saeb. Mathematics. Performance. Organization of pedagogical work.

O OLHAR DO PROFESSOR DE MATEMÁTICA SOBRE O SAEB E A ORGANIZAÇÃO DO TRABALHO PEDAGÓGICO

Resumo: Trata-se de uma pesquisa qualitativa, cujo objetivo foi identificar elementos que apontem modificações sofridas na organização do trabalho pedagógico em virtude da aplicação do teste cognitivo do Saeb na disciplina matemática do 9º ano do ensino fundamental. O questionário com perguntas abertas foi respondido por um grupo de 31 professores de matemática dos anos finais do ensino fundamental de quatro Coordenações Regionais de Ensino do Distrito Federal. Os principais resultados apontaram que 55% dos professores usam os resultados do Saeb tendo como foco o trabalho pedagógico; 45% dos professores apontam desconhecimento dos documentos que tratam sobre o Saeb; 40% dos professores fazem o trabalho pedagógico focado no teste; 59% dos professores sinalizaram desconhecer a Plataforma Devolutivas Pedagógicas. Conclui-se que a utilização dos resultados do Saeb pelas escolas não está sendo usada para moldar sua ação educativa, ainda que a expansão de seu uso abarque outras finalidades.
Palavras-chave: Saeb. Matemática. Desempenho. Organização do Trabalho Pedagógico.

SAEB and the school context

The publicizing of the results of the Brazilian Education Evaluation System (SAEB), as

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well as of the Basic Education Development Index (IDEB), while seeking to give transparency and publicity to the educational process, has been used for comparison and ranking among schools, causing reactions that affect the school context. These reactions end up generating reflections and commitment for actions, on the part of the managers of the education departments, schools, and teachers, aimed at changing the negative results. But over almost three decades of the SAEB, the collection of data on Brazilian basic education and the proficiency scales presenting the results have shown that the expected progressive and more convincing evolution in student performance has not yet been achieved.

The assessments that make up the SAEB, the focus of this study, the National High School Exam (ENEM), and the Programme for International Student Assessment (PISA) are examples of large-scale assessments, although they have different purposes, in common, it is expected that their results serve as a parameter to government agencies that aim at the formulation and reorientation of public and educational policies (ALAVARSE; MACHADO; ARCAS, 2017; BAUER; ALAVARSE; OLIVEIRA, 2015; FREITAS *et al.*, 2014; PEREIRA; MOREIRA, 2020).

The first SAEB edition was held in 1990 by the Ministry of Education (MEC). The main objective of its creation was to collect data that would provide information about the quality of basic education offered. The information was supposed to "subsidize decision making, aimed, in the first place, at the managers of the educational system" (PESTANA, 1998, p. 67). The main idea was to enable, from the knowledge of the reality of education, actions in the areas of educational public policies.

The National Institute for Educational Studies and Research Anísio Teixeira (INEP) is a federal agency, linked to the Ministry of Education, which is responsible for promoting studies, research, and large-scale assessments of the Brazilian educational system. INEP periodically applies large-scale assessments, intending to subsidize the formulation and implementation of public policies for the educational area, as well as pedagogical work.

Since its creation, the SAEB has been undergoing methodological, theoretical, structural, and operational changes that aim to improve the quality of information and also its scope. The latest change occurred in 2019 to adapt it to the Common National Curriculum Base (BNCC). The BNCC becomes the reference in the formulation of the items of the 2nd year (Portuguese Language and Mathematics) and 9th year of elementary school, in the case of the tests of Nature Sciences and Human Sciences, applied in a sample way (BRASIL, 2019, n.p.).

Until 2019, the SAEB consisted of the "National Assessment of Basic Education (ANEB) and the National Assessment of School Performance (ANRESC), commonly known

as Prova Brasil" (BRASIL, 2018, p. 9). As of 2019, the SAEB is now identified by school year and stage, and by the area of knowledge assessed, for example, SAEB 9th Year of Elementary School: Mathematics.

The SAEB consists of a cognitive test applied to students and a contextual questionnaire that collects information on the context in which schooling occurs. The mathematics cognitive test is composed of items drawn from a reference matrix that is structured on problem-solving. Looking at the test items

> [...] it is possible to state that a student has developed a certain skill when he can solve a problem from the use/application of a concept already built by him. Therefore, the test seeks to present, as a priority, situations in which problem-solving is meaningful to the student and mobilizes his cognitive resources (BRASIL, 2011, p. 77).

In this perspective, it is understood that "mathematical knowledge gains meaning when students have challenging situations to solve and work to develop resolution strategies." (BRASIL, 2011, p. 77, our translation). That is, when the student is led to interpret the statement of the proposed question, structure it, think about it mathematically, and develop resolution strategies (TEIXEIRA; MOREIRA, 2020), otherwise, it will be a simple exercise, or a doing math.

The teacher is the main focus, considering that the assessment, above all, should produce information for diagnostic use, and the offer of pedagogical support concerning the formatting of the cognitive test of the SAEB assessment, INEP has made available, in 2015, the Pedagogical Feedback Platform. This platform offered to the school management team and the classroom teacher "[...] an effective way of pedagogical interpretation of the knowledge and skills tested by large-scale assessments, to improve student learning" (BRASIL, 2014, n. p., our translation). According to Pereira, in 2016 the project, Pedagogical Feedback Platform, "was discontinued" (2022, p. 25, our translation).

Although pretentious, the intention was to assist the use of data from the SAEB assessments by teachers and schools, contributing to their understanding and use in the organization of pedagogical work, promoting the improvement of performance in basic education; explaining to teachers and managers of education departments, which knowledge and skills are verified by the SAEB; enabling the appropriation by teachers and staff of the results of large-scale assessments, and collaborating with teachers in their teaching activities (BRASIL, 2015).

This platform "brings external large-scale assessments and the school context closer

together, making the data collected more relevant to student learning" (BRASIL, 2019, n. p., our translation), among other features items are made available with their descriptive sentence and analysis with pedagogical commentary, written and commented by experts, offering information and materials to enable the understanding and contextualization of the results from the analysis of the item.

Authors such as Sousa and Oliveira (2007), Luckesi (2011), Pereira and Moreira (2020), among others, understand that large-scale assessments are not just a simple cognitive test and measurement for the presentation of results; it is a complex task that requires problematization, constant reflection and planning subordinated to well-defined goals.

Silva and Pereira (2020) understand that assessment offers important data, but that needs to be analyzed through a qualitative lens, not only by government agencies but also by the school context, adding contextual data that address the intra and extra-school realities in which the teaching and learning process takes place.

In recent decades, the topic of learning assessment in the educational system has occupied the attention of educators, trainers, managers of educational institutions, and researchers in the educational field (FREITAS *et al*., 2014).

Even though this theme is widely researched and much is said about assessment, there are no significant changes in school contexts regarding the forms of assessment, and even less in the use of its results to support the teaching practice. Perrenoud (1999) reminds us that to change the forms of assessment it is necessary to change the school, it is necessary to change the relationships and the pedagogical practices that take place inside the classrooms. These changes should be oriented to the reflection on the large-scale assessments as possibilities of diagnostic use before the results and, from them, decide which strategies to adopt in the pedagogical process (LUCKESI, 2011).

In this sense, some questions arise about the use of the results of the large-scale assessment in pedagogical practice, such as: are the items of the SAEB tests used in pedagogical actions? Do the availability, access, and discussion of the SAEB pedagogical support material offer elements capable of promoting reflection on pedagogical practices? Are they capable of generating actions aimed at the context of the organization of pedagogical work?

This study sought to identify whether the organization of pedagogical work changes due to the application of the SAEB. Among other things, it is necessary to understand what those who closely follow the movements on the school site think and how the pedagogical work is done about the cognitive mathematics test of the SAEB 9th year of elementary school.

Methodological path

This research, of qualitative approach, sought to identify elements that point to changes in the organization of pedagogical work due to the application of the SAEB cognitive test in mathematics in the 9th grade of elementary school. To this end, the study was carried out with a group of mathematics teachers from the late years of elementary school from four Regional Education Coordinations (CRE) of the Federal District (DF): Samambaia, São Sebastião, Ceilândia, and Plano Piloto. The choice of the regions was intended to be representative of schools from different locations in the Federal District.

The research took place in the period from March to June 2019, using as an instrument for data collection a questionnaire composed of four open-ended questions (GIL, 2002), requiring subjective answers. The instrument was sent by e-mail to the schools' supervisors and coordinators which enabled the application to the teachers. The respondents were 31 mathematics teachers who were working with 9th grade at the time of the application of the questionnaire in 2019, and who had worked with 9th grade in 2015 and/or 2017.

To contemplate the goal of identifying whether the organization of pedagogical work changes due to the application of the SAEB cognitive test, four guiding questions were defined for the study: Q1) Do you use in any way the mathematics items and/or texts of the Saeb tests? If yes, explain the purpose of using them; (Q2) Does your school make available, study, and/or discuss INEP documents about the SAEB cognitive test? If yes, explain how this happens and what are the objectives of this action; (Q3) Does your school have any kind of preparation in mathematics for the SAEB cognitive test? If yes, explain how it happens; (Q4) Did you have access to the SAEB pedagogical reports? If yes, was this material useful for your work in the classroom? Please justify it.

To analyze the responses to the questionnaires, elements of Bardin's (2016) content analysis were used. The material referring to the answers to the questions was subjected to treatment and coded. This process was divided into three phases (BARDIN, 2016): pre-analysis; material exploration and treatment of results; inference, and interpretation. The inferences and interpretations were based on the teachers' reports, in this case, the subjective answers.

The first question (Q1) gave rise to the category Test Use. The question required agreement or disagreement regarding the use of the test. From the teachers' answers about the use of the items made available by INEP in the Platform for Pedagogical Feedback of the test in their pedagogical work, it was possible to compose three subcategories: Results as the focus of pedagogical work, Teaching material, and Not using the test.

Question 2 (Q2) allowed the elaboration of the SAEB Document Study category, with three subcategories: Result as objective, Information material, and Unawareness.

The third question (Q3) produced the category Preparation for the Test with three subcategories: No preparation for the test, Pedagogical work focused on the test, and Use as teaching material. The question in this question required agreement or disagreement regarding the fact that there is preparation for the SAEB test.

Finally, question 4 (Q4) generated the category Access to Pedagogical Feedback, resulting in two subcategories: Unaware and Subsidies to pedagogical practice. For this category, the question also required agreement or disagreement concerning having access to the material available on the INEP website.

For a global understanding, Table 1 presents the synthesis of the analysis of the material collected with the four categories and their respective subcategories.

Table 1: Categories established for analysis

	SUBCATEGORIES	
CATEGORIES	Test usage	Results as the focus of pedagogical work Teaching material Non-use of test items
	SAEB documents study	Outcome as objective Information material Unawareness
	Test preparation	Test-focused pedagogical work Use as teaching material No preparation
	Access to pedagogical feedback	Unknowledge Pedagogical practice subsidy

Fonte: Source: Elaborated by the authors (2022).

Below, the results of the mathematics teachers' answers about the SAEB and the organization of pedagogical work are presented. The information is organized separately by categories and their respective subcategories. For each subcategory, extracts from the responses that had the greatest similarity within the frequency were presented.

Results and discussion

Given the results found in this work, a relevant reflection concerns the role that large-scale assessments effectively assume in the school context and the uses of their results, something that seems to be not well defined.

One of the major problems refers to the fact that the results of large-scale assessments are seen by the community, in general, from the comparison and classification, which may

consequently be leading the school to exclusion of student participation in the test, as Bauer, Alavarse and Oliveira (2015, p. 1379, our translation) point out,

> They can stimulate perverse behavior, of which the best known are the exclusion of the populations that are supposed to have the worst results, already in the enrollment processes, their concealment on the days of application of tests, inviting them not to show up, or simply an amplification of inequalities within the school, investing more in students who have potentially better prospects for results

As Freitas *et al*. (2014, p. 47, our translation) point out, the large-scale assessment is an "instrument" that collects information, allowing managers to monitor the "performance of the systems" and use it as a subsidy for the "purpose of reorienting public policies", in this sense, the results of a large-scale assessment should be intended to alert educational managers to remedy the difficulties of the school and promote equity to the disadvantaged socioeconomic strata.

Test Usage Category

The category Test Use gathered responses from 31 teachers about the first question - do you use in any way the mathematics items and/or texts of the SAEB tests? If yes, explain the purpose of using them (Q1). The frequencies corresponding to the subcategories Results as the focus of pedagogical work was 55% (17 respondents), for Didactic material was 16% (5 teachers), and for Not using the test items were 29% (9 teachers).

In the affirmative answer, the teacher explained the reason for the use, which revealed that there is some influence, from the concern with what is charged in the test compared to what is developed in the classroom (COLA, 2015).

The study revealed that 71% of teachers (22 teachers) use the test items with a pedagogical purpose, which allows us to infer that the aim is to improve student performance. The analyses also indicate that this use aims to familiarize students with the configuration of the items in terms of format and content required in problem-solving, reducing the differences between what is offered in the development of classroom work and what is required in the test.

In this sense, the problem of this action lies in the fact that the use of the items is not based on learning, but on the search for results in the SAEB. The evidence points to the pedagogical work focused on training students with the SAEB test. From this perspective, the focus of the teaching and school work is no longer on student learning but on obtaining satisfactory results on the SAEB. This action may be based on the way the results are seen by

society, which generates the idea of competitiveness caused by the disclosure of the SAEB results, a fact that "fosters competitiveness and neglects the development of assessment practices that involve all the actors of the educational process" (VILLAS BOAS, 2017, p. 56, our translation).

Subcategory: result as the focus of pedagogical work

The mathematics cognitive test items are used by 17 participants (55% teachers) to improve the SAEB results, as the statements below reveal:

> *Yes, working with questions from previous tests helps students to become familiar with the type of question and the content that is covered.*
> *Yes, to reduce the distortions between what is required in the classroom and what is charged in this assessment.*

These fragments show that the use of materials available from tests (applied in previous editions) has as its main purpose the preparation of students for the test. This result is consistent with the studies of Bonamino (2013), Brooke (2013), Freitas (2013), Sousa (2013) that revealed the use of the results as preparatory for the test, a fact that contributes to the emptying/emptying of the teacher's curriculum planning.

Dias Sobrinho (2002, p. 26, our translation) considers that in these cases, the concept of learning is diminished since it is "reduced to the student's ability to report something that the test items ask for. However, the development of pedagogical work with the items themselves, or their adaptation, according to teachers, also seeks to familiarize students with similar questions and with objects of knowledge required in the SAEB, an action that seems to be justified in an attempt to minimize the distortions between what is offered in the classroom context and what is required in the test.

Subcategory: Teaching material

The use of the material from the tests to diversify the pedagogical work, adapting it to the planning and the objects of knowledge developed in the classroom, as indicated by 16% of the teachers (5 teachers), who reported:

> *Yes, I adapt them to the content planning of mathematics teaching and learning.*
> *Yes, we try to bring to the students different questions from the book, mainly to make them realize that math is part of everyday life.*

The teachers also informed that the material is used as a teaching tool for learning, in which adaptations are made according to the needs that arise in the development of the pedagogical work, and emphasize that they are not used as training, in the search for improvement, exclusively, in test performance. In this action, there is no evidence of a purpose of use to obtain good results on the test.

Even if, used only as pedagogical diversification, it signals the possibility of dialogue between large-scale assessments and teacher planning, as pointed out by Bauer, Alavarse and Oliveira (2015), and an openness to the understanding that the results of these assessments may offer subsidies for the reformulation of teaching practice (PIZARRO; LOPES JUNIOR, 2017).

Subcategory: Non-use of test items

For 29% of the participants (9 teachers), the non-use of the items from the SAEB test occurs, in some cases, as a result of the school creating its didactic material that contemplates the test matrix, besides the material prepared according to the National Curricular Parameters (PCN), so they do not use items from the SAEB test.

> *No, we created our material following the PCN.*
> *No, there is no time for that, it is complicated to complete the curriculum fulfillment.*

Teachers also point out that there is no time to develop activities with the type of items from the SAEB, because the priority is curriculum fulfillment, and due to the understanding that school realities are different, they consider it unfeasible to use this material.

The teachers state that they are creating material according to the NCP, which suggests that there is a teaching plan. They ratify that the definition of the contents to be developed by the students is the teacher's responsibility, and that the fulfillment of the planning with the conclusion of the contents scheduled for the closing of the bimester is a reality of the school system structure, enunciated and agreed upon in the school's collective planning.

The signaling, by teachers, of not using the test items in the classroom justified by the lack of space in the pedagogical planning, considering that sometimes it is not possible to comply with what is established in the basic curriculum, shows the unfeasibility of accommodating other objects of knowledge to the pedagogical work, since this would probably overload the annual school planning. There is also reference to the unfeasibility of using this material because the students' skill development in the classroom is lower than what is required in the SAEB test, and such incompatibility prevents these materials from being used in the planning of activities.

Teachers' reports of not using the results are aligned with the study of Bauer; Alavarse; Oliveira (2015), who state that tests do not always influence schools and teachers, since sometimes they simply ignore the evidence pointed out by large-scale assessments and continue to do what they have always done in the classroom, following the school planning. Similarly, Brooke and Cunha (2011), Oliveira (2013), Sousa (2013) corroborate the statement that the results of assessments are not yet used by schools to shape their educational action.

SAEB Documents Study Category

The category Study of Documents of the SAEB aggregated answers from 31 teachers about the second question - does your school make available, study and/or discuss INEP documents about the cognitive test of the SAEB? If yes, explain how this happens and what are the objectives of this action (Q2). The frequencies in the subcategories Result as a goal was marked by 32% (10 teachers), Information material by 23% (7 teachers), and Unawareness by 45% (14 respondents) of the participants.

According to Freitas *et al*. (2014), the availability of data and materials on the SAEB, they emphasize that offering them to institutions does not mean that they will be considered in the planning, because, most of the time, the data generated by the SAEB are not recognized by the subjects of schools, managers, and teachers, although they have legitimacy.

Subcategory: Outcome as Objective

Ten teachers, 32% of the study participants, reported that discussions are held at school about the forms of assessment, with emphasis on the results and on preparing students to take the test, to improve their results. To this end, item models are used, content is prioritized, and adjustments are made to the timetable. They also reported that the study of documents related to the SAEB, for the most part, emphasizes the school's capacity to prepare students for the test, a capacity that is seen as a reflection of performance in the SAEB.

> *Yes, discussions are usually held about the forms of assessment and how the assessment will reflect how well the school is or is not prepared for its students to perform and what will be done to improve the results.*
> *Yes, we discuss improving our results/ when the result is off target.*

There is a reference to the study and discussion of such documents and materials, especially when the school fails to meet the established goals and does not have good results on the SAEB. These studies and discussions intend to improve the student's performance on the

test.

The use of assessment results may involve risks for the school curriculum and consequently its impoverishment (FREITAS, 2013), as an example, a situation of training students, "known as teaching to the test, which occurs when teachers focus their efforts preferentially on the topics that are assessed and disregard important aspects of the curriculum, including non-cognitive ones" (BONAMINO; SOUSA, 2012, p. 383, our translation).

On the other hand, the study of the documents should focus on the appropriation, by the teaching staff, of the objectives and methodologies of the SAEB, so that both the material and the results could be understood and used in favor of the students.

Subcategory: Information Material

For 23% of the participants (7 teachers), the study of the SAEB documents is used to inform about the student's performance on the SAEB.

> *Yes, only the school's grade is informed.*
> *Yes, only for knowledge of the existence of such documents.*

The documents and materials are presented to the teaching staff only so that they are aware of their existence. Some excerpts explain that teachers are informed of the school's performance results in meetings, without reference to materials for study and/or discussion, and criticism. There were quotes regarding information whose purpose, based on the performance results, was to develop a pedagogical work based on the test matrix.

In this regard, Fernandes (2009, p. 157, our translation) points out that the use of these materials can be made by schools and recommends that the analysis and discussion of the assessment results be included in school planning "so that, from there, they can verify the consequences for a possible reformulation of their teaching and assessment policies, but taking care that the test does not become the center of pedagogical work.

Subcategory: Unawareness

There were 14 respondents (45% of teachers) who said they were unaware of the existence of the documents and materials related to the SAEB made available by INEP.

> *I do not know.*
> *I have not participated in anything like that.*

This percentage of teachers who are unaware of the existence and availability of

SAEB documents indicates alignment with research that revealed that in different educational contexts there is a lot of difficulty among managers and teachers to access, interpret, analyze, and use the results of large-scale assessments (ALAVARSE; MACHADO; ARCAS, 2017; SOUSA, 2013), even though INEP organizes and makes available a large database related to Brazilian education for studies and diagnoses.

> There is a lot of information available to educational managers and teachers. This information seeks to help them in their educational practices. However, for this to happen, they must be willing to leave their comfort zone and seek to deepen their knowledge [...]. Otherwise, it may be just another evaluative moment held in schools, without effectively contributing to the improvement of student learning (STADLER, 2017, p. 138, our translation).

If the teacher consciously and reflectively chooses not to use results and information from the SAEB, it is understandable; however, to claim ignorance alludes to negligence. For, it should be noted that the education professional should be aware of the educational context in which he or she is inserted, and large-scale assessments are part of this context since they subsidize decisions on important educational policies for the school community.

Test Preparation Category

For this category, Test Preparation, 30 teachers responded to the third question - In your school is there any kind of preparation in mathematics for the SAEB cognitive test? If yes, explain how it happens (P3). In the subcategory Pedagogical work focused on the test, 40% of teachers (12 respondents) signaled affirmative, 30% of teachers (9 participants) pointed out the Use as teaching material and the same percentage, 30% (9 teachers) point out that There is no preparation for the SAEB test.

The lack of clarity about the learning objectives may generate mistaken actions on the understanding of the need to train students for the test, for the school to achieve high performance in the ranking (FERNANDES, 2009). However, it must be clear that the SAEB test matrix is a cutout of the curricular content established for a particular stage or school cycle, and school curricula are the guidelines for teaching in school, so the test matrix and the school curriculum are not divergent.

Subcategory: Test-focused pedagogical work

Para 40% dos professores (12 respondentes) há organização do trabalho pedagógico como preparação dos estudantes para a obtenção de bom resultado no teste do SAEB.

> *Yes, the questions on the school tests are contextualized and formatted according to the SAEB standard.*
> *Yes, by working with questions similar to previous exams.*

Teachers revealed that the pedagogical work is sometimes developed on questions similar to items from previous tests, at which time there is discussion and resolution of items. Other teachers referred to the fact that the questions in school assessments and tests are formatted in the pattern of the SAEB test items, a result that is in line with other studies (BONAMINO; SOUSA, 2012; DIAS SOBRINHO, 2002; FERNANDES, 2009).

The fact that schools use SAEB items as a reference for the organization of pedagogical work "ended up reinforcing traditional learning assessment practices" in schools (BONAMINO; SOUSA, 2012, p. 386, our translation). In addition to the fact that these actions may be based on the schools' search for "outlining defensive strategies that can guarantee them a good place in the ranking" (FERNANDES, 2009, p. 123, our translation).

It is a mistake to consider that training for the SAEB test can help the learning process. On the contrary, prioritizing it to the detriment of actions aimed at meaningful learning can lead to a narrowing of the curriculum and limitations in teaching.

It was evident that some teachers focus the development of their pedagogical work on preparing students for the SAEB test. This is done based on the resolution of questions similar to items from previous tests. Another form used is the preparation of school assessments formatted in the pattern of the SAEB test items. Another form that is also mentioned is the use of the test items as teaching material used throughout the year, or even as tutoring.

Subcategory: Use as teaching material

The use of the test items as teaching material for test preparation is reported for 9 participants (30% of teachers).

> *Yes, in a very simple way, there is an approach to some content for the external evaluations, the goal is to make the students' text interpretation of the tests well.*
> *Yes, the preparation is done in the daily classes.*

Teachers report that the preparation is carried out during the classes, in monitoring sessions, and on call for questions, with reinforcement classes, such as text interpretation material, so that the items of the SAEB test are subtly incorporated into the classes, throughout the pedagogical process.

Coordinators and teachers when redefining the program content to meet what is assessed

in the SAEB, according to Bonamino and Sousa (2012, p. 384, our translation) make the adoption of "teaching to the test" as teachers claim to have "incorporated the practice of preparing students to get used to the texts, the commands, and the length of the Prova Brasil reading tests." However, one must be careful, because learning cannot be reduced to teaching to the test (BONAMINO; SOUSA, 2012; DIAS SOBRINHO, 2002).

Concerning the organization of pedagogical work, modifications were identified as a result of the test. The modifications, for the most part, are the result of changes in the focus of pedagogical work, previously on student learning, now on the result of test performance. As a consequence, the mischaracterization may reveal the causes of students' nonlearning and low performance in the SAEB.

Subcategory: no preparation

For 30% of the teachers (9 teachers), the initiatives to prepare for the SAEB test do not occur:

> *No, there is no preparation for the SAEB test.*

By this result, it is possible to infer that the teachers who made the above statement, are in schools that do not practice the culture of organizing school work planned and oriented to the assessment results, showing a "no reverberation in the school dynamics" of the practice of preparing students for the SAEB test, initiatives referred in other schools and by other teachers (SOUSA; OLIVEIRA, 2007, p. 813, our translation).

Access to Pedagogical Feedback Category

The category Access to Pedagogical Feedback aggregated responses from 29 teachers on the fourth question - did you/do you have access to the SAEB pedagogical feedback? If yes, was this material useful for your work in the classroom? Justify, the frequency of the subcategories Unawareness about access to pedagogical feedback from the SAEB was 59% (17 teachers), and Subsidization of pedagogical practice was 41% (12 teachers).

Subcategory: Unknowledge

For 17 participants (59% of the teachers) the Plataforma Devolutivas Pedagógicas, a tool made available by INEP to help them analyze items from the SAEB, is unknown.

No, I think there must be such material, but I have not been provoked to use it.
No, I am not aware of it.

The excerpts above reveal teachers' lack of knowledge regarding the Pedagogical Feedback Platform, therefore, they are unaware of its structure and the possibilities of using it for pedagogical planning.

Stadler's research (2017, p. 35, our translation) diagnosed teachers' lack of knowledge regarding the design, objectives, and results of the SAEB assessment, as well as about the "design and constitutive elements" of the SAEB test. This fact may be occurring with the Pedagogical Feedback Platform, not yet known by the teacher.

Another hypothesis is that, despite being an important source of information, it may not be being explored to its full potential due to the teacher's inherent difficulties in working with this type of platform, data, or information (ALAVARSE; MACHADO; ARCAS, 2017; SOUSA, 2013; SOUSA; OLIVEIRA, 2007).

Subcategory: pedagogical practice subsidy

There were 41% of teachers (12 respondents) said to use the material from the pedagogical feedback to support their pedagogical practice.

Yes, to provide support to teachers to review their teaching methods and make changes to improve learning.
Yes, because daily life issues are addressed in the SAEB items.

The answers indicate that items from the SAEB test are used in the daily school routine, indicating that their objective is to review practices to work on student weaknesses and improve learning.

Schools should not remain indifferent to the results of external evaluations, as they are opportunities to reflect and decide whether something should be done (FERNANDES, 2009). In the same vein, Pizarro and Lopes Junior (2017) point out the challenges imposed by the results of a large-scale assessment, considering that they can promote reflection in the school, at first for the organization of the pedagogical work and, consequently, on classroom activities, aligned and reflected on what would be more appropriate to promote different types of competence in students.

It is important to be clear that not only the cognitive test represents the result of the SAEB, but also the data and information that are collected in the contextual questionnaires at the time the test is applied, and answered by teachers, managers, and students. The result of the

cognitive test should be analyzed and interpreted by managers, teachers, the school community, and society in general in light of other elements, such as the school's self-evaluation of its work/pedagogical project; the evaluation of the classroom; the diagnostic assessments of the school reality, students and the school itself; the assessments made in class councils, pedagogical coordination, among others (SILVA; PEREIRA, 2020).

Some reflections

When analyzing the data between the categories and subcategories, it is observed that there are some discrepancies compared to the teachers' statements.

The use as didactic material (30%) in the category Preparation for the test, or as didactic material (16%) in the category Use of the test, or as a subsidy for pedagogical practice (41%) in the category Access to pedagogical feedback, present evidence that teachers use didactic material in their teaching practices.

However, other data reveal that teachers reported that they are Unaware (45%) of the SAEB documents, and equally Unaware (59%) of the access to pedagogical feedback. These results show an important convergence between them, unawareness, revealing that many teachers participating in the survey do not have access to the documents made available by INEP. Contradictory to the many affirmations of Use as didactic material and Subsidies for pedagogical practice.

É It is possible to speculate about teachers who do not use the test material (29%), as well as respondents that there is no preparation (30%) of students for the test, because they are unaware of, or do not study the SAEB documents.

Finally, the result of the subcategory Result as the focus of pedagogical work (55%), from the category Use of the test, compared to the subcategory Pedagogical work focused on the test (40%), from the category Preparation for the test, shows the difference in 15% of teachers who stated that they use the test result to focus on pedagogical work. It can be seen that, at least in terms of discourse, teachers were not in the majority in stating that they use the test results to prepare for the test.

Conclusions

Given the objective of this study, to identify whether the organization of pedagogical work changes due to the application of the SAEB assessments, and the results found, a thorough analysis of the school reality is necessary through dialogues between educational managers and

the various segments of the school context, to plan feasible educational projects and proposals together.

Comparing the answers, the results reveal a tendency for teachers to focus on the test (55%), and to use the test as teaching material (16%). In the student training setting, 40% of the teachers responded that their work is focused on the test and 30% responded that they use it as teaching material in preparation for the test. At the same time, the study shows that 45% of the teachers are unaware of the SAEB documents and 59% of the teachers were unaware of the existence of the Pedagogical Feedback Platform, available for access on INEP's website. These data reveal a discrepancy between the information.

However, the data are consistent with studies such as those of Brooke and Cunha (2011), Oliveira (2013), Sousa and Oliveira (2010), who found that the results of large-scale assessments are not yet being used by schools to shape their educational activities, although the expansion of its use covers other purposes, such as the unified vestibular; the creation of quotas revealed by social differences among students, among others, linked to the results of these assessments (PEREIRA, 2022).

Finally, given the divergence of information presented in this study about the conceptions and guidelines on the purposes of the SAEB, further study is needed to better understand the mathematics teacher's view on the SAEB and its use in the organization of the pedagogical work.

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References

ALAVARSE, O. M.; MACHADO, C; ARCAS, P. H. Avaliação externa e qualidade da educação: formação docente em questão. **Revista Diálogo Educacional**, Curitiba, v. 17, n. 54, p. 1353-1375, jul./set. 2017. Disponível em: https://www.redalyc.org/articulo.oa?id=189154957014. Acesso em set. 2020.

BARDIN, L. **Análise de conteúdo**. Tradução Luís Antero Reto, Augusto Pinheiro, São Paulo: Edições 70, 2016.

BAUER, A.; ALAVARSE, O. M.; OLIVEIRA, R. P. Avaliações em larga escala: uma sistematização do debate. **Educação e Pesquisa**, São Paulo, v. 41, n. esp., p. 1367-1382, dez. 2015. https://www.scielo.br/j/ep/a/PgMHxD3BYhzBr6B7CpB5BjS/?format=pdf&lang=pt Acesso em set. 2020.

BONAMINO, A. M. C. Avaliação educacional no Brasil 25 anos depois: onde estamos? In: BAUER, A; GATTI, B. A. (Org.). **Ciclo de Debates Vinte e cinco anos de avaliação de sistemas educacionais no Brasil:** implicações nas redes de ensino, no currículo e na formação de professores. Florianópolis: Insular, 2013. p. 43-60.

BONAMINO, A. M. C.; SOUSA, S. Z. Três gerações de avaliação da educação básica no Brasil: interfaces com o currículo da/na escola. **Educação e Pesquisa**, São Paulo, v. 38, n. 2, p. 373-388, abr./jun. 2012. Disponível: https://doi.org/10.1590/S151797022012005000006. Acesso em 08 de outubro de 2020.

BRASIL. Secretaria de Educação Fundamental. **Parâmetros curriculares nacionais:** introdução aos parâmetros curriculares nacionais. Secretaria de Educação Fundamental. Brasília: MEC/SEF, 1997.

BRASIL. Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (Inep). **Guia de Elaboração e Revisão de Itens**. Brasília: Inep, v. 1, 2010.

BRASIL. Ministério da Educação. **Plano de Desenvolvimento da Educação**: SAEB: ensino médio: matrizes de referência, tópicos e descritores. Brasília: MEC, SEB; Inep, 2011.

BRASIL. Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (Inep). **Projeto Devolutivas Pedagógicas das Avaliações Educacionais**. Brasília: Inep, 2014.

BRASIL. Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (Inep). **Plataforma devolutivas pedagógicas**. Brasília: Inep, 2015. Disponível em: http://portal.inep.gov.br/web/guest/devolutivas. Acesso em: 13 fev. 2020.

BRASIL. Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (Inep). **Relatório Saeb (Aneb e Anresc) 2005-2015**: panorama da década. Brasília, 2018.

BRASIL. Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira (Inep). **SAEB Histórico**. Brasília: Inep, 2019. Disponível em: http://portal.inep.gov.br/educacao-basica/saeb/historico. Acesso em: 13 fev. 2020.

BROOKE, N.; CUNHA, M. A. A avaliação externa como instrumento de gestão educacional nos estados. **Estudos & Pesquisas Educacionais**, Fundação Victor Civita, v. 2, p. 3-64, 2011. Disponível em https://fvc.org.br/wp-content/uploads/2018/04/estudos_e_pesquisas_educacionais_vol_2.pdf. Acesso 08 out. 2020.

BROOKE, N. Políticas estaduais de responsabilização: buscando o diálogo. In: BAUER, A; GATTI, B. A. (Org.). **Ciclo de Debates Vinte e cinco anos de avaliação de sistemas educacionais no Brasil:** implicações nas redes de ensino, no currículo e na formação de

professores. Florianópolis: Insular, 2013. p. 119-146.

COLA, A. R. **Avaliação Externa e em Larga Escala**: o entendimento de professores que ensinam matemática na Educação Básica. 2015. 96f. Dissertação (Mestrado em Educação Matemática) – Pontifícia Universidade Católica de São Paulo, São Paulo, 2015. Disponível em: https://tede2.pucsp.br/handle/handle/11023. Acesso em 08 de out. 2020.

DIAS SOBRINHO, J. **Universidade e avaliação:** entre a ética e o mercado. São Paulo: Insular, 2002.

FERNANDES, D. **Avaliar para aprender:** fundamentos, práticas e políticas. São Paulo: Editora Unesp, 2009.

FREITAS, L. C. Caminhos da avaliação de sistemas educacionais no Brasil: o embate entre a cultura da auditoria e a cultura da avaliação. *In*: BAUER, A; GATTI, B. A. (Org.). **Ciclo de Debates Vinte e cinco anos de avaliação de sistemas educacionais no Brasil:** implicações nas redes de ensino, no currículo e na formação de professores. Florianópolis: Insular, 2013. p. 147-176.

FREITAS, L. C.; SORDI, M. R. L.; MALAVASI, M. M. S.; FREITAS, H. C. L. **Avaliação Educacional**: caminhando pela contramão. 7. ed. Petrópolis, RJ: Vozes, 2014.

GIL, A. C. **Como elaborar projetos de pesquisa**. 4. ed. São Paulo: Atlas, 2002.

LUCKESI, C. C. **Avaliação da aprendizagem escolar**: componente do ato pedagógico. São Paulo: Cortez, 2011.

OLIVEIRA, R. P. A utilização de indicadores de qualidade na unidade escolar ou porque o IDEB é insuficiente. *In*: BAUER, A; GATTI, B. A. (Org.). **Ciclo de Debates Vinte e cinco anos de avaliação de sistemas educacionais no Brasil:** implicações nas redes de ensino, no currículo e na formação de professores. Florianópolis: Insular, 2013. p. 87-100.

PEREIRA, C. M. M. C; MOREIRA, G. E. Brasil no Pisa 2003 e 2012: os estudantes e a matemática. **Caderno de Pesquisa**, São Paulo, v. 50, n. 176, p. 479-497, abr./jun. 2020. Disponível em: https://publicacoes.fcc.org.br/cp/article/view/6627. Acesso em 22 de jul. 2022.

PEREIRA, C. M. M. C. **O Saeb na percepção dos professores dos anos iniciais do ensino fundamental**: desafios e possibilidades em Matemática. 2022. 303 f. Tese (Doutorado em Educação) – Universidade de Brasília, Brasília, 2022. Disponível em: https://repositorio.unb.br/bitstream/10482/43941/1/2022_CatiaMariaMachadodaCostaPereira.pdf. Acesso em 22 de jul. de 2022.

PERRENOUD, P. **Avaliação:** da excelência à regulação das aprendizagens – entre duas lógicas. Tradução: Patrícia Chittoni Ramos. Porto Alegre: Artes Médicas Sul, 1999.

PESTANA, M. I. G S. O sistema de avaliação brasileiro. **Revista Brasileira Estudos Pedagógicos.** Brasília, v. 79, n. 191, p. 65-73, jan./abr. 1998. Disponível em: https://doi.org/10.24109/2176-6681.rbep.79i191.1044. Acesso em 10 de out. 2020.

PIZARRO, M. V; LOPES JUNIOR, J. Os sistemas de avaliação em larga escala e seus resultados: o Pisa e suas possíveis implicações para o ensino de ciências. **Ensaio Pesquisa em Educação em Ciências,** Belo Horizonte, v. 19, e2776, 2017. Disponível em: https://doi.org/10.1590/1983-21172017190119. Acesso em 08 de out. 2020.

SILVA, E. F; PEREIRA, C. M. M. C. **Ideb e a "Qualidade" da Educação Básica:** para além do fetiche da nota. [2020]. Disponível em: https://www.sinprodf.org.br/ideb-e-a-qualidade-da-educacao-basica-para-alem-do-fetiche-da-nota1/. Acesso em: 12 out. 2020.

SOUSA, S. Z.; OLIVEIRA, R. P. Sistemas de avaliação educacional no Brasil: características, tendências e uso dos resultados. **Relatório de pesquisa apresentado à FAPESP**, São Paulo, jul. 2007.

SOUSA, S. Z.; OLIVEIRA, R. P. Sistemas Estaduais de Avaliação: uso dos resultados, implicações e tendências. **Cadernos de Pesquisa**, São Paulo, v. 40, n. 141, p. 793-822, 2010. Disponível em: https://doi.org/10.1590/S0100-15742010000300007. Acesso em 10 de out. 2020.

SOUSA, S. Z. Avaliação externa e em larga escala no âmbito do estado brasileiro: interface de experiência estaduais e municipais de avaliação da educação básica com iniciativas do governo federal. *In*: BAUER, A; GATTI, B. A. (org.). **Ciclo de Debates Vinte e cinco anos de avaliação de sistemas educacionais no Brasil:** implicações nas redes de ensino, no currículo e na formação de professores. Florianópolis: Insular, 2013. p. 61-85.

STADLER, J. C. **Prova Brasil de Matemática do 5º ano do ensino fundamental:** resultados nas plataformas Devolutivas Pedagógicas e QEdu. 2017. 167f. Dissertação (Mestrado em Educação) – Universidade Estadual de Ponta Grossa, Ponta Grossa, 2017. Disponível em: https://tede2.uepg.br/jspui/bitstream/prefix/2394/1/Stadler%2c%20Jocasta.pdf Acesso em 12 de out. 2020.

TEIXEIRA, C. J; MOREIRA, G. E. **A proposição de problemas como estratégia de aprendizagem da matemática:** uma ênfase sobre efetividade, colaboração e criatividade. São Paulo: Editora Livraria da Física, 2020.

VILLAS BOAS, B. M. F. (Org.). **Avaliação:** Interações com o trabalho pedagógico. Campinas, SP: Papirus, 2017.

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