

## Contributions of an evaluative action to the network movement of mathematic fair: a case study<sup>1</sup>

### *Contribuições de uma ação avaliativa para o movimento em rede da feira de matemática: a case study*

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#### ABSTRACT

At Mathematic Fair (FMat), the work evaluation in its formative character aims to provide an overview of what was developed by the authors to contribute with relevant aspects to be revisited and provide, when it is appropriate, continuity and better results of the studies. However, there are studies which indicate that such a purpose occurs only occasionally. In view of this, from a qualitative and interpretative perspective, we propose to analyze the Networked Movement of Mathematic Fair (MRFMat) contributions to an evaluative action based on a dialogic perspective. The investigation involved the development of this evaluative action in two different regional editions of Santa Catarina de FMat held in 2019. The data for analysis were produced through interviews with three exhibitors of two exhibited works in the referred regionals fairs and who participated in the action. The analytical process indicates this evaluative action, when performed in a dialogic and formative perspective, contributes: (i) to the *expositor person* regarding to formation and attitudes, concepts, and emotions development; (ii) for the *work exposed* in terms of scientific quality and continuity perspectives; (iii) to the dynamics of the evaluation process regarding to the evaluator person. We

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concluded that the action corroborates the qualitative assessment claims supported by the Movement, constituting a potential dialogic assessment for FMat.

*Keywords:* Evaluative Posture. Dialogue. Assessment at the Mathematics Fair.

## RESUMO

Na Feira de Matemática (FMat), a avaliação dos trabalhos, em seu caráter formativo, visa fornecer um panorama acerca do que foi desenvolvido pelos autores de modo a contribuir com aspectos pertinentes de serem revisitados, propiciando assim, quando apropriado, a continuidade e melhores resultados dos estudos. No entanto, há pesquisas que indicam que esse propósito ocorre apenas pontualmente. Face a isso, a partir de uma perspectiva qualitativa e interpretativa, nos propomos analisar as contribuições para o Movimento em Rede da Feira de Matemática (MRFMat) de uma ação avaliativa pautada numa perspectiva dialógica. A investigação envolveu o desenvolvimento dessa ação avaliativa em duas diferentes edições regionais de Santa Catarina de FMat realizadas em 2019. Os dados para análise foram produzidos por meio de entrevistas com três expositores de dois trabalhos expostos nas referidas regionais e que participaram da ação. O processo analítico indica que essa ação avaliativa, quando realizada na perspectiva dialógica e formativa, contribui: (i) *para o sujeito expositor* no tocante à formação e desenvolvimento de atitudes, conceitos e emoções; (ii) *para o trabalho* exposto no que tange à qualidade científica e perspectivas de continuidade; (iii) *para a dinâmica* do processo avaliativo no tocante ao sujeito avaliador. Concluímos que a ação corrobora com as pretensões qualitativas de avaliação defendidas pelo Movimento, constituindo-se assim um potencial de avaliação dialógica para a FMat.

*Palavras-chave:* Postura Avaliativa. Diálogo. Avaliação na Feira de Matemática.

## Introduction

The expression “*evaluation is a controversial theme*” can be considered an educational jargon. Used in various contexts, it can reveal the fragility of the evaluative processes, in which the logic of assessing” to examine “, “to quantify”, “to classify” or “to regulate” predominate. With regard to the network movement of the Maths’ Fair<sup>2</sup> (MRFMat), the sense of evaluation

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<sup>2</sup> When we refer to the expression MRFMat we will be considering all the dimensions of FM itself, whether regional, state or national, its principles, objectives and evaluation process. By mentioning “Maths Fair” or “Regional Maths Fair” or “State Maths Fair”, we will be referring to one of the instances that are part of the movement, respecting its context characteristics. For more information about the dynamics of the fair, the evaluation and management process, see <http://www.sbembrasil.org.br/feiradematematica/feirasnacionais.html>.

from its beginning is that of “[...] contribute to the improvement of [exposed] works and theoretically subsidize students and teachers for the execution of new” projects (ABREU, 1996, p. 19), although an award of the works is also made. With the aim of emphasizing the first direction, from 2006 onwards, it was decided that all considerations for this purpose should be communicated to the work advisor, which later happened by sending the synthesis report by e-mail, after the exhibition.

However, Zabel and Scheller (2020), when analyzing summary reports of work evaluation from a Regional Mathematics Fair, realized that the *feedback* from the evaluators given to the tutors and students regarding the subsidies for improving work is still lacking. In another study, Scheller and Zabel (2020), when investigating the records of two Regional Maths’ Fairs, realized that some evaluators are still concerned with only determining the award of the work, that is, classifying. These results indicate that the initial meaning of the evaluation at the Maths’ Fair (FMat) is still not being fully addressed, given the problems identified in the written record of the evaluators.

We understand that this record - the *feedback* - should consider or provide a panorama of what has been done and exposed, both regarding the orality and the writing of the report. Although new possibilities have not been realized, it is pertinent to value the work developed, in addition to providing a positive/suggestive return to the teachers and students who provide conditions for the deepening and development of the work exposed, for “[...] more important than the results will be the referrals we will give them” (SCHELLER; GAUER, 2006, p. 85). In this sense, it is necessary to provide feedback to the authors to better understand what they are developing and what changes are necessary to improve the work.

In an action-reflection-action movement, we assumed that the activity of the evaluation group could be more contributing to the development of the work in its various aspects, if they established a dialogical interaction with the exhibitors and/or advisors, depending on the category<sup>3</sup> in which the work is inscribed. After all, when the authors receive the summary report of

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<sup>3</sup> In the FMat, the works are classified into one of the following categories: Ed. Childhood, Special Education, Elementary Education - early years, Elementary Education - late years, High School, Higher Education, Teacher and Community.

the evaluation, they are required for lack of information or for poor writing (ZABEL; SCHELLER, 2020), it is no longer possible to talk to the evaluation group, without understanding what has been left to them.

From this, it is fundamental to find spaces for an evaluation involving exhibitors, advisors and evaluation group, which has as its objective “[...] to put all those involved forward, allowing a more open discussion on the correct and incorrect actions of all the parties involved, as well as to offer the interested parties subsidies for the improvement of the works” (BREUCKMANN, 1996, p. 27-28). From this perspective, having one of the authors of this Article the opportunity to collaborate in the evaluation of works exposed in two regional editions of FMat in 2019, a moment of dialogical interaction was experienced with the exhibitors of each of the works during the exhibition.

In this dialog, several notes/inquiries were made, based both on the aspects of orality, and on the written report previously studied, in an attempt to understand and instigate, in exhibitors, the search for new meanings (BREUCKMANN, 1996). After this process, we turn our gaze to the evaluative action<sup>4</sup> with the objective of issuing and presenting considerations about the action-reflection cycle. So we have come up with the following question: *What contributions can an assessment action provide to the networking movement of the Mathematics Fair?*

Based on these notes, we aim to present the analysis of this action performed during the activities of evaluating works exposed in two regional editions of FMat, based on the considerations of the exhibitors and the documents elaborated by them. To this end, we assumed and brought considerations about the evaluation considered in a dialogical perspective (FREIRE, 2013; FREIRE; SHOR, 1986). In the following, we detail the methodological aspects of the research followed by the presentation and discussion of the results. In the final part, we resumed the objective of the research, explaining considerations regarding the contributions of the evaluation action to the MRFMat.

## **Interlacing: Assessment, Dialog and the Mathematics Fair**

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<sup>4</sup> Evaluative action here understood as an imbued movement of an intentionality by the evaluators and the dialogical interaction between exhibitors and evaluators. That is, an action in which there is interaction between those involved with a view to producing transformations, both of the subjects and of the work.

In the opposite of the predominant pedagogical practices, the evaluative process can no longer be summarized as judgment, measurement, examination, verification or confirmation, aimed only at classification and selection. For this, as highlighted by Hoffmann (2017, p. 19), the assessment should be “[...] predominantly at the service of the action, placing the knowledge obtained, by observation or investigation, in the service of the improvement of the situation evaluated”.

This same author brings us that:

The studies in evaluation leave behind the path of absolute truths, objective criteria, standardized measures and statistics, to warn about the essential meaning of the evaluative acts of value interpretation on the object of the evaluation, **of a conscious and reflective action in the face of the situations evaluated and of the exercise of dialog among those involved.** (HOFFMANN, 2017, p. 18, our emphases).

In order for the dialog exercise to overcome the evaluation practices in force, it must not be done “from A to B or from A to B, but from A to B” (FREIRE, 2013, p. 116). The dialog, in this perspective, is of the “[...] The moment in which humans meet to reflect on their reality as they do and redo” (FREIRE; SFOR, 1986, p. 123). Thus, within the educational process, dialog represents

[...] the joint confirmation of the teacher and the students in a common act of knowing and recognizing the **object of study**. Then, instead of transferring knowledge statically, as if it were a fixed teacher’s possession, dialog requires a dynamic approach toward the object. (FREIRE; SHOR, 1986, p. 124).

However, Freire (2013) warns that we should not understand the dialog just as a technique we can use to achieve results. On the contrary, “[...] Dialog must be understood as part of the very historical nature of human beings” (FREIRE; SHOR, 1986, p. 122). Thus, when we think of an evaluation permeated by dialog, it cannot be understood as yet another way of evaluating, or only as a technique, but as an attitude assumed in the act of evaluating. Such posture requires the opening of the subjects involved, as well as the acceptance of “[...] that the other is different and can tell us something we do not know” (FREIRE; FAUNDEZ, 2011, p. 53). To say something is to say the word. For Freire (2013), the word is praxis, it is action and reflection, the essence of dialog.

When we project our gaze to the FMat considering this evaluation perspective,

we identified that, in order to avoid the traditional dissociation between process and product evaluation, an untied theoretical contribution of the practice is needed. Damázio (2001) and Gauer (2004) also argue that the work should be evaluated considering its totality, based “[...] in the perception of the significant structure for each fact or set of facts approached” (GAUER, 2004, p. 34).

Thus, in this context, the act of assessing is done with the intention of “[...] analyzing the process of creating a work developed, based on what is transmitted by exhibitors, what is reported in written form and the degree of change this work has provided to students” (SCHELLER; GAUER, 2006, p. 85). To this end, these authors understand that

[...] the evaluator and the evaluatee can **engage** in dialog to question, debate, suggest or recommend, with the aim of improving all the knowledge that is being disclosed there. A climate of **trust** and cordiality will make everyone communicate with less formality. (SCHELLER; GAUER, 2006, p. 90, our emphases).

We understand that the realization of this practice will only happen if the premises of the dialog, defended by Paulo Freire, are guaranteed, so that the evaluator and the exhibitor will separate themselves in the certainty that they are better than at the moment they were met. Although this call for dialog brought by Scheller and Gauer (2006) was made more than 15 years ago, in the materialization of the evaluation process, a resistance to the effect of a more dialogical posture between evaluators and exhibitors is still evident. Such resistance may be related to the lack of openness of evaluators and exhibitors, clarifications and understanding of the real reasons for the evaluation, as well as epistemological conceptions of those involved. While impediments may be related to the lack of adequate time and space. The investigation of these barriers is not the object of the study of this article, however, we understand that to resume the discussions of an evaluation permeated by the FMat dialog, through empirical studies and theoretical reflections, can be a means of overcoming them.

Oliveira, Civiero and Guerra (2019, p. 9), in a study on teacher training in the context of the FMat, argue that the evaluation should happen “[...] in a formative perspective, which has intertwined dialog and collaboration.” We understand that this defense is more closely linked to dialog and collaboration

between the subjects who are members of each of the evaluation groups, because the dynamics of the evaluation on the day of the exhibition include a conversation with the different evaluators of a work. In this conversation, the purpose is to elaborate the synthesis of the evaluation, which will return to the authors, as well as to decide the award of each work (CIVIERO; POSSAMAI; ANDRADE FILHO, 2015). However, the result of this discussion does not return to the exhibitors in a dialogical way, which indicates the absence of a dialogical process.

Thus, to think about the evaluation process at FMat, we can support these considerations and suggest that it should consider a dialog between exhibitors and evaluators on the results, function and implications of this evaluation for the work carried out, in order to provide *feedback* between the real and potential of a job. However, this requires a collective effort, because this way of conceiving the evaluation is based on concepts of democracy, citizenship and the right to development, as well as on overcoming the evaluative practices in which control and verticality prevail in the process.

## **Meteorological Procedures**

This qualitative research (BOGDAN; BIKLEN, 1994) attempted to analyze an evaluative action carried out in the process of evaluating works that occurs on the day of the exhibition of a FMat, from the perspective of the exhibitors. To this end, an analytical process was adopted that values descriptive and interpretive aspects, after all, “[...] more important than navigating in favor or against the current, it aims to explore the depths of the river” (MORAES; GALIAZZI, 2011, p. 145). The description and interpretation contribute to expressing the understanding of the phenomenon we researched, that is, to understand the meaning that this evaluative action has for the MRFMat. This is a case study understood as a “[...] detailed observation of a context, [...] or of a specific event” (BOGDAN; BIKLEN, 1994, p. 89).

In view of the research’s claim, several moments were necessary for its realization, with five of the main ones: (i) the planning of an evaluative action; (ii) the development of this action during the evaluation in two FMat regions; (iii) the analysis of the reports of these two studies submitted to the regional (text

1) and state editions of the FMat (text 2); (iv) a conversation, in the form of a semi-structured interview, with the exhibitors of these works; (v) analysis of the results.

The first moment refers to the planning, in the first half of 2019, of an evaluation action based on the results indicated by the Scheller and Zabel (2020) and Zabel and Scheller (2019; 2020) studies. Whereas the second occurred in the following six months, and consisted of the development of this action in two editions of different FMat regions.

TABLE 1 - STEPS OF THE EVALUATION ACTION DEVELOPED.

Steps	Description of the Step
1 <sup>st</sup>	Prior to each of the two different regional editions of FMat (referred to here as A and B), the evaluator performing this action received the written report (Text 1), carried out the reading to then make notes and considerations in order to contribute to the development of the work and the participants, leaving them registered in the printed text itself. The questions asked referred to both the form and content of what the authors intended to report;
2 <sup>nd</sup>	On the day of the exposition of Regional Fair A and B, the evaluator listened carefully to the oral socialization. It sought to provide a favorable environment so that exhibitors could feel safe, confident, stimulated to speak about the work developed and willing to share ideas and knowledge (scientific). He spoke to the exhibitors, trying to understand the authors' wishes with the work, the motivations that led them to develop it, the way it was developed and the results that the group arrived at, among others;
3 <sup>rd</sup>	From what he heard and what he previously read, he talked to the exhibitors about the exhibition material, the mathematical content used/developed in the work, the dynamics of the presentation, aspects of the work that stood out, possible aspects that could corroborate what has already been developed. He also discussed with the exhibitors regarding the text 1 (the report) they were presenting, seeking to draw a parallel between the oralized and the written, and to investigate aspects recorded in the text 1 related to the content and form. With this, he urged the exhibitors to reflect on aspects that are unclear or lacking from questions and suggestions to the group, aspects that, after the exhibition, can be evaluated by the participants for incorporation or not in the work.

SOURCE: Elaborated by the authors.

In a third moment, believing in possible contributions from the evaluative action to the writing of the work, the researchers' gaze turned to a second version of each of the reports (Text 2) that had been submitted to the state step of the event. Then, based on a primary analysis of the two versions, the researchers planned the semi-structured interview.

The data were constituted by a free and informed consent form and obtained by means of documents - texts 1 and 2 - and interview. The choice of different sources was due to the fact that they provide different types of data: (i) documents - indicate the development of the work in terms of writing, both in form and in content; (ii) interview - aim to know the perceptions of those involved about the experience of the action.

The semi-structured interview with the participants of the two works was carried out by *google meet*, which made video recording possible. To preserve anonymity, the three participating subjects were coded by S1A, S1B - exhibitors of the High School category - and S2 for the Teacher category. In order to facilitate the analytical process, the two interviews were later transcribed, as this makes it possible to know better and “[...] understand the individual experience of people in a similar situation” (FLICK, 2009, p. 107).

The analytical process was inspired by the discursive textual analysis (MORAES; GALIAZZI, 2011) that enabled the emergence of three categories. From these categories, which portray the contributions of this evaluative action, we describe and discuss each of them based on theoretical and empirical contributions.

## **Results and Discussion**

In the analysis process of the elaborated reports and the subjects' speeches on the contributions to the MRFMat of the performed evaluation action, seven subcategories emerged, culminating in three main categories. We identified that such an evaluation action contributed to: (i) *for the exhibitor subject* with regard to the construction and development of attitudes, concepts and emotional aspects; (ii) *for the work* presented with regard to scientific quality and prospects for continuity; (iii) *for the dynamics of the evaluation process* with respect to the evaluative subject. We emphasize that these three categories of contributions are not disjointed, but related.

### ***Contributions to the exhibitor subject***

In relation to this first category, we identified that the evaluative action corroborates with the exhibitor subject regarding the development of *attitudinal, conceptual and emotional aspects*. As regards contributions to the first aspects, the evaluative action promotes the *development of attitudes* that can be perceived in conceptions about writing, in the defense of the importance of theory in its work, in critical and reflective manifestations or in the appreciation of dialog.

The evaluative experience has given the authors timely situations that have stimulated them to reflect and act, because the dialog established between them instigates the exhibitor to reflect and act, not only to point to failures. Thus, the possibility of action-reflection occurs when the authors reflect whether or not the considerations left by the evaluator are pertinent, not only by passively accepting them. This can be realized when S1A values dialog:

*“Many times some come up and say: ‘this part here wouldn’t be so much or do you think better the way you are? What would you do if you had found another result here?’ They end up questioning. There we keep up thinking: my God! And now? There we say we will see. Then, seeing the draft and the specific part: My god, luck that I changed! And now I have the opportunity to present this new way, and better.”*

The fact that the evaluator questions the exhibitors about what they think about another alternative or perspective provides a dialog about the possible implications, which generates a more open type of discussion, as was the case with S1A. This meets the Freirean perspective of dialog, which occurs from A to B, in which there is no hierarchy relationship between the subjects, but respect and awareness that there are different knowledge. For Freire (2013, p. 115), in this type of horizontal relationship “it is born from a critical matrix and generates criticality”.

Thus, the dynamics of the evaluation contribute to reflection, and this movement does not constitute a simple acceptance or denial of what was suggested by the evaluator, providing conditions for the formation of critical thinking of these exhibitors. For S1A, go to the fair, receive the suggestions from the evaluator, go back to school, improve work, expand the research, present again at another FMat:

*“this part is very cool, because we end up being criticized. A good, constructive criticism, which sometimes in school we do not receive so much. [...] We feel the criticism, but try to absorb, arrives at school. And it is very cool that part of you receive **it and be able to turn it into something good, into a learning in itself**. It is cool when a problem comes, a placement and we have to discuss, see how it will improve and research here and research there, discuss here, discuss from there, end up coming in another answer or perspective. Even because we think our work is perfect, there we get there and end up seeing that much could be improved and you learn that every time you give it to improve, **that something will never be 100% perfect**”.*

In the speech, we note that dialog promotes the recognition of S1A from its incompleteness (FREIRE, 2013). So, like S1A, we realized that S1B also feels touched by the interaction between them and the evaluator, describing it as a space for sharing ideas and information or even for teaching/clarifying. This is noticeable when S1B expresses *“that he even commented with us that because of the chemical connection the oil ends up affecting the water and the soil”*. It should be noted that, in a FMat, dialog is not based solely on the discussion of mathematical aspects, but on knowledge that goes beyond, such as discussion of the impacts of cooking oil on the environment.

Another emerging aspect in relation to contributions to the exhibitor subject is the change of attitude toward the writing of the report. These are new perceptions about the function of this writing and its relationship with the work carried out. This is perceived when the two versions of the reports elaborated by S2 are confronted and there are evident modifications in text 2, which were made in the sense of better expressing the purposes of the work.

*“Precisely, when I made the first [report] I did not see how to expand and with this guidance that I had in the evaluation, I already have another view. Because people are sometimes working and developing, but cannot then put into the account, you are not always seeing what you are doing, do you understand!? This assessment helped me have that vision”.*

S2 points out that, prior to the interaction with the evaluator, he did not realize that the writing of his report did not match his oral presentation, but had another attitude. In addition, S2 reports that he was encouraged to reflect on the motivations that led him to choose certain activities and resources, not others.

*“I didn’t have to look to deepen this summary, to point out where the theory was at work. From there I realized: “oops, I need to point out where this theory of my work came from and where my work was supported. [...] We study, we read, but often we do not want to make this theory and practice relationship. It doesn’t mean I don’t do a good job in the room, I believe I do, but often we end up leaving it behind. And when I go to the maths’ fair it’s time to go deeper and go back, it’s what happened [now on the second FMat]. [...] What remained for me is that I have practice, but that it is important to always be related to theory. Not that I did not know the theory, but it is necessary to be resuming, seeking, and this evaluation made me realize that I cannot forget the importance of the theory as well. I already have the contribution of the theory, but to review and return, so that it does not go forgotten.”*

In the case of S2, we realized that there was recognition of the need for a theory to legitimize the practice and incitement of reflections about it. The discussion also caused her to think and reflect, even if she did not legitimize writing as being important in her practice. Thus, the FMat was, for S2, a motivation to seek a theoretical deepening, contributing to its formation. This reconfiguration of S2 conceptions has a relation with probable conceptual changes, another contributing aspect of the evaluative action that we bring in the sequence.

Regarding the contributions related to *the conceptual aspects*, we identified that the evaluative action collaborated with the development/training of the subjects, both in the learning or expansion of content and improvement of orality, as for the learning perceived as a result of the modification of the structure and content of the work report.

The changes brought in the three participants’ speeches showed that there is development when this dialogical posture is present, whether when the evaluator questions a content error (mathematical) that causes the restudy, when it suggests a possibility that makes use of other content or even when it instigates the possibility of enlarging one already present at work. The importance of this posture is highlighted when S1B expresses: *“So when he quotes something, talk to us, it’s always better, let’s even learn something new.” [...] He ended up helping us better explain the subject”*.

In addition to aspects related to content, orality also receives collaborations in the scenario set up. S1A and S1B report that the evaluator asked

*“[...] for people to have a bit of calm in talking, because we end up acting against a bit. [...] He suggested that it was not necessary to talk about all the formulas that we had there, but to talk about a few only, safely, [...] and the others just set out on the poster there. [...] Sometimes they give a tip, even if we don't go to another step you will be able to use it again, even within the school itself, because we end up having many presentations and sometimes other opportunities arise in no way? Sometimes he gives some touch on what you're talking about, we can bring it to life, as well as a whole. How many times do we use orality! (S1A)*

*[...] Because it was very in mind, I liked the presentation, it was interactive, so I took it to life know: the presentation itself, the matter, the content, these things were added content for me. (S1B)”*

We realize that the dialog is also to be with the other, to be sensitive and to be placed in the position of the other, which requires commitment in the act of evaluating both evaluators and exhibitors. In the environment established, through empathy of the evaluator, S1A recognizes that he understands them, is coherent and is aware of the position of exhibitors by seeking to create an environment of trust and direct them to the presentation, because he understands and values the potential of exhibitors. In addition, S1A also considers that what is provided can be used in other environments, that is, that the evaluative action provides learning that is transposed into other environments, not just in the FMat.

For S2, the interaction with the evaluator allows a better understanding of the relevance of a theory to base and base what was being exposed. This has implications for conceptual conceptions about teacher action, and was favorable for her to understand and justify her choices. Based on the dialog established in the evaluative action, S2 may have felt provoked to reflect on its own practice in the classroom if it was awakened by a paradigm of formation characteristic of practical rationality. After all, “[...] the purpose of the dialog is epistemic development, not in the form of consensus, but as a search for a deeper understanding, together with the partners in the dialog” (ALRØ; SKOVSMOSE, 2006, p. 132).

Also about conceptual learning, we highlight that the participants may have developed them related to the structure and content of the report, since writing up to seven pages is not common practice either for students of secondary education or among teachers who teach mathematics in basic education. On this contribution, S2 expressed:

*“I presented and then he was questioning me, commenting on what he could improve and what was missing, for example: “You can enlarge further here...”, “Ah, that’s not in your summary”, “tell the story of the numbers and the game, but you missed it in the summary”. So it was cool because he had the summary in hand. This relationship made me think of the things I did not put in, because I presented a practice that I did not have there in the abstract. But in my head, at the hour, you think everything is there, that everything is right. So when someone comes who starts to tell you and question certain things, you see that you can enlarge, that you have how to enlarge! I enlarged and looked more Constanci Camii that was indicated to me, so we go in search. Because if they don’t speak to us, we don’t see how to expand and with that guidance I had on the question of evaluation, I have already had another vision. That feedback was cool! And it was as a result of this assessment that I made changes. If it were not for evaluation, if he had arrived there and said that it was good I would not grow in my text. No, inn it! I would leave it as it was!”*

From the dialog with the evaluator, S2 was made possible to proceed with his writing, which until then did not bring the essential elements to a report that was in keeping with what was being presented. She recognizes missing elements in text 1 and advances in text 2, as in the case of the objective of the work, when it makes it explicit that: *“To seek with this work to provide conditions for the development of the notion of number and other mathematical notions of the child’s daily life.”* Thus, there is evidence of better understanding about the structuring elements and that they should be present in the written report of the work. We believe that this has been possible because the evaluator took a rigorous stance toward the exhibitor, of someone who questions, listens, makes think, proposes, instigates the reasons to do what he did and how he did, characteristic of learning with others and creative rigor (FREIRE; SHOR, 1986).

Another contribution of the evaluative action to the exhibitor concerns *emotional aspects* perceived in the existence of positive affectivity, affectivity that materializes in the incentive to exhibitors during the dialog. We point out that, for those involved, the action was not perceived as an act of verification, but as something that provided both conceptual and affective-emotional development, establishing a respectful and favorable climate for the evaluative approach, an action that helped to balance emotions. About this, they report:

*“In my opinion, not only should he [the evaluator who performed the action] be like that. Even because, when an evaluator talks to us, whether or not we want to be in a moment of tension, it is a moment that we get nervous! And I find it very cool when an evaluator arrives and talks to us. It ends up relieving that tension and we end up releasing more. There is lightweight what was so tense before. [...] There many times if the teacher is talking, we even end up explaining a little slower and more detailed, something that we knew is, but in the nervous it only ends up turning the words (S1A). [...]they end up helping and being interested more in substance than just watching the presentation and ready. [...] This has made us motivated and smarter with the work itself.” (S1B).*

These fragments brought by the students of High School reveal the importance of the evaluator’s dialogical posture so that they feel emotionally secure, balanced, comfortable to interact and talk about work and valued. After all, risking can cause discomfort, but “[...] when the two poles of dialog are thus linked, with love, with hope, with faith in the other, they are critical in the search for something. So there is a sympathetic relationship between the two. Only there is” communication there (FREIRE, 2013, p. 116).

It should be noted that this aspect had already been expressed by Damázio (2001, p. 88), when he suggested that the evaluator should be the one who possesses characteristics and abilities capable of “[...] Creating a favorable environment for exhibitors and mentors to overcome possible anxieties and changes of the emotional system”. We say, then, that one of the characteristics of the evaluator would be to establish a more affectionate, human and humanizing environment.

On the other hand, he also reveals that the exhibitors do not defend an inertia posture, of someone who aims only to examine and verify, exposing themselves to the interaction and establishment of an affective environment. Moreover, S1A reveals that such a stance would lead to insecurity and alienation.

*“It Is so good when the evaluator arrives, he helps, but he also praises a part right!. He ends up making us a little safer, knowing that at least something is good. That is because we do not know if it is good enough, if it is not when nothing is said. So I think very cool when some teacher, evaluator or anyone, arrives and praises the booth or work or anyway anything that ends up giving that lively. We are half discouraged when people watch with a middle face like this, what makes us think: my god, I wonder if we are talking about something wrong or very fast? So this ends up discouraging enough.” (S1A).*

This statement indicates how much exhibitors are feeling the need for a dialog in which both words of motivation, encouragement, encouragement and rebalancing are present, as well as aspects that favor cognitive development. This is because affectivity has the power to positively influence the way in which these exhibitors can develop socially and emotionally. The affection set up in the environment will have enough strength to overcome obstacles, as perceived in previous speeches. Therefore, there is a need to develop – we as human beings and participants in the assessment – our sensitivity, so that we can constantly reflect on the ‘so that it is said, what is said, as it is said, when and why it is said’ to the exhibitors what we say/express.

### ***Contributions to work***

In relation to the second category, the focus was the work presented, which refers to the contributions of this evaluative action to the continuity of work and its *scientific qualification*. These contributions are described considering the enlargement, alterations and improvements in the writing and/or orality of the work, as well as for collective reflections generated about this study object, which were derived from the dialog established on the day of the exhibition of the works.

We understand that there are some imbrications of this category with the previous one, because the exhibitors are the ones that make the improvements of the work and, in this movement, are also developed. This perception is evident in the following sections, in which S1A and S2 validate the evaluative action performed for the extension and improvement of the work, as well as for the experience itself. Considerations can also contribute to changes in the work of aspects that were flawed (in the case of errors) or unclear.

*“Some were very dear, they ended up giving suggestions, which is what we sometimes need to be able to **expand and improve** the work and some end up just going to evaluate and ready in, not giving opinion. I even find it very legal when an evaluator comes and not only evaluates us, but he also helps to improve, both for that fair that we are participating in and for others that may come. Whether you want or not it’s something that **adds to our overall experience** and helps **improve the work**. I remember that he gave us an idea, so that we could go back to the rooms and show what he did. [...] And I remember that he gave this tip to us and when we returned, he ended up doing and presenting in the next phase. (S1a)*

*“I presented and then he was questioning me, commenting on what he could improve and what was missing, for example: “you can **enlarge** further here.”. [...] So when someone comes who starts to tell you and question certain things, you see that you can enlarge, that you have how to enlarge! (S2).*

These contributions allow us to think about the evaluator’s meeting with exhibitors as an educational situation, since they assume the role of knowledge subjects (FREIRE, 2020) pervading dialog. This gives the conditions for these subjects to continue developing the work or reflecting on others they may develop. Based on the evaluator’s contributions, the authors’ action on the post-fair shows that they are not simply received and accepted in an uncritical manner.

*“Because sometimes a criticism may not serve us so well. But we ended up going away by laughing and **talking about the criticisms** received and at another moment we ended up meeting and taking seriously: “**Are we going to use or are we not going to use?** Is it constructive or not for us?” But we make use of most of them.. A large part innt? Even because, the people who give tips are experienced people, who end up seeing something that we don’t see.” (S1A)*

Although this has already been evidenced as a contribution to the exhibitor himself, we emphasize that it promotes improvement and continuity of work. In this sense, we understand that action contributes to collective reflections occurring both in the environment of the FMat and in the spaces to which these subjects return. After all, “[...] he dialog only exists when we accept that the other is different and can tell us something we do not know” (FREIRE; FAUNDEZ, 2011, p. 59). This movement, which became possible due to the evaluative action, makes possible the advances in the work, in the form of densifications or alterations that are pertinent, both for orality and for writing, as mentioned by S1A: *“We have made some changes, we have added some tips, I even think we have added an experience to more than we have done, and fixing some mistakes, as has been pointed out, errors of measures.”*

Another contribution to the work concerns the *scientific quality*, which made it possible to better understand the elements that constitute the report, perceived in the content of the information present in the text and in the material of the fair. We emphasize that this action also generated a reflection

by causing exhibitors to think about this record, because in addition to ensuring consistency between the oralized and the written, the text is elaborated according to the orientations and language proper to science.

*“We kept underlining some important parts, discussing that it would give us to put in the work and not just that one there, we have used two or three sources of work. And **we ended up referencing at the end, giving the credits**, even because it was something that we took from someone else’s work. Not copy and paste, but we ended up taking the idea.” (S1A)*

Finally, we understand that this action was potential for the creation of theoretical and practical subsidies for exhibitors to continue their studies, while raising awareness of them. Freire (2020, p. 65) says that “[...] what is meant by dialog, in any case, is the problematization of the knowledge itself”. As it can be seen in the following passage, this problematization was present and boosted the work advances.

*“If it were not for evaluation, if he had arrived there and said that it was good I would not grow in my summary. No, innit! I would leave it as it was! “Ah, that’s not in your summary”, “tell the story of the numbers and the game, but this missed in the summary”. [...] This relationship made me think of the things I did not put in, because I presented a practice that I did not have there in the abstract. (S2).”*

Thus, the evaluator’s problematization enabled the development of the work and the improvement of the written report, which was published in the annals of the Catarinense Fair. Thus, the action provided that the published abstract had elements more consistent with what happened in the experience: “[...] All written parts are preceding the fair and, at the same time, the record of what remains” (ZABEL; SCHELLER, 2020, p. 18).

### ***Contributions to the dynamics of the evaluation process***

As the third category of contribution of the evaluative action, we highlight that, for the subjects of the research, it can be a reference to a dynamic different from what has been happening in the evaluation on the day of the fair. These contributions refer to an *evaluator’s attitude toward exhibitors in a transparent, ethical and committed process*. In addition, *they recognize and reinforce the importance of dialog between those involved in an environment in which evaluators’ considerations are then valued*.

We believe that the following statements make it possible to express considerations about the posture and dynamics of evaluation during the fair period:

*“So, in my opinion, from the experience I had, I would like it to always be so. That the evaluator should arrive, assess how it has to be. Don't let us down and leave. Let him really get there, distracted us to calm us down and even point out the mistakes. Because I see no problem at all, the best thing is when someone ends up seeing what we don't see and showing what they should improve.” (S1A)*

*“When an evaluator arrives who interacts with us, you end up rejoicing because you can present your work and explain exactly how it was. We can explain and expose ourselves. Because they have some who come and give to see that they read [the written account] and they help you mean that they explain, they go along with you at work.” (S1B)*

*“It doesn't have to be very long, it can be a little small, we know that the evaluators have a lot of work for a day, so it is not possible to extend a lot, stop and talk a lot with everyone, otherwise one will not be able to cope with it. But something short like this, even because it makes a difference, in every booth that the evaluator passes and interacts makes the difference as a whole. Finally, I think it should be like this, the evaluator arrives, with a good look on his face, because there are some who arrive with an angry face, even scare us. You should evaluate how it has to be, but also interact, show what we can improve, help as a whole at work. If you have something wrong, take it and talk, but also if you have something good, it is worth it paying a compliment to motivate us! Not only in us, but in all those who are presenting themselves, because sometimes we get a whole day presenting, [...] and **when someone comes who interacts, talks, looks and pays a lot of attention, it's the best thing. It makes us crazy to introduce again! I think that should be so, it should have this interaction.**” (S1A)*

*I agree with S1A, for me, for the evaluator to be good, the interaction with the work has to have. He should comment on the work, talk about what he thought of it, talk to the presenter, because from time to time we can't express everything in the presentation and in that [...] you can talk a few things you let pass and explain the content better just like that. So I think that this interaction with the evaluators is interesting.” (S1B)*

*“[with the action] I think it had a difference. It's better with the evaluator explaining on time, for sure! It was very good! That year was very good for me because the points that make you pull your ear yourself and realize what you didn't do and what you need to improve. **The conversation was very good.** Because when I received Gered's report, I had no question and no doubt about it. What has improved?*

*This assessment [present in the synthesis report] is succinct, does not tell me where I have been wrong, what does this is the conversation with the evaluator.” (S2)*

From the performance of the evaluative action, the participants provided evidence that they value the dialog, shared ideas and notes made by the evaluator, recognizing them as pertinent to their development and work, as well as they indicate how the assessor’s posture should be at the time of the fair. This may be indicative of overcoming the decision taken at the Fifth Trade Fair Assessment Seminar in relation to the evaluator’s profile, when they suggested very technical roles for him.

From the various speeches already brought throughout the text, we can affirm that, through this evaluative action, the subjects envision the evaluator as someone who:

- (i) comes to the booth to listen to what exhibitors have to present, but not just to listen;
- (ii) interact, propitiate or contribute to the establishment of an affective and favorable environment for overcoming emotional changes that may be present there;
- (iii) praise, highlighting the positive aspects of the work seen, which motivates the continuity and values the work carried out;
- (iv) be critical, ask about certain aspects and encourage reflection on others;
- (v) be consistent, making them feel subject to the process and not subject to the evaluation;
- (vi) be committed to the process and respect the knowledge of the learners, that is, have empathy and consideration (ALRØ; SKOVSMOSE, 2006);
- (vii) be available and foster dialog, a more open relationship;
- (viii) have creative rigor (FREIRE, 2011);
- (iv) share ideas, learn and teach at the same time.

Finally, someone who is sensitive and ethical, with more humanizing knowledge and characteristics than techniques. Thus, we realize that this subject envisioned by exhibitors is someone who does not only fulfill the task of a mere external evaluator, but also of educator committed to a progressive educational practice (FREIRE, 2011).

## Considerations

The research presented in this Article focused on the evaluation of studies at the FMat, the evaluative practice as a guide, the overall formation process of the exhibitor as the nucleus and the editions of the FMat as consolidated space for observation, aiming at analyzing the contributions to the MRFFMat of an evaluation action based on the dialog. As results, we identified that such action has reflexes in the exhibitor subject, in the exposed work and in the dynamics of the own Fair's evaluation process.

With regard to the exhibitor subject, the action contributed to the formation and development of the attitudinal, conceptual and emotional aspects of this one. This was perceived in the understandings about the function of the writing of the work and the relevance and necessity of a theory to legitimize the work presented. In addition, critical and reflective attitudes/manifestations are evidenced in the face of the evaluative action, not as a simple acceptance of what arises during verbal interactions, but understanding them as likely to be questioned and improved, even later. They value and emphasize the importance of dialog for the constitution of an affective environment capable of collaborating for the development of content (both mathematical and structure and content of the written report) and orality, of strengthening the horizontal relationship and minimizing the discomforts that may arise during the dialog.

In relation to the work, intertwining with the contributions to the exhibitor subject, it was noticed that the action promotes conditions for its continuity or improvement, as well as for the scientific quality of the exposed and the written work. The dialog provides participants with better conditions to understand *what, why, how come and how* they can move forward with the work (oralized and reported), as it is permeated by the sharing of ideas and knowledge. From this process, we identified the evaluation continuity by triggering collective reflections, now after the FMat, permeated by aspects that we understand as complex and therefore not only affected by the synthesis report.

Another contribution directs us to the potentials of this action as a possible reference of work evaluation dynamics in the period of FMat's fair, namely, to a position that can *provide transparency, ethics and commitment*. Thus, regarding the evaluation process itself, the action proved to be potential for guaranteeing

the evaluation objectives at the FMat, recommended by Abreu (1996), Gauer (2004) and Damázio (2001), among others. In general, the results found with the realization of the present research, revealed by the voices of participating exhibitors of the FMat, brought strong influences on the importance of a dialogical evaluation process between the evaluation group and the authors of the study.

Based on the development of this research, we defend the potentiality of a dialogical evaluative action that would facilitate an affective climate based on the commitment made by the subjects; for a horizontal relationship between those involved, which allows everyone to feel involved in the process and responsible for development; for recognition of the ethical and formative character of the evaluation.

Therefore, considering the evaluation dynamics already established in the MRFMat - group evaluation with evaluators coordinated by one of the members - we believe that the coordinator of the evaluation group may be the figure indicated to promote this dialog with the exhibitors and/or advisors. This suggestion is made by virtue of the tasks that the MRFMat defends for it. However, our intention is not to exclude the other evaluators from the dialog, nor to shirk the responsibility of the evaluators for the writing of the summary evaluation report. We also understand that the dialog with exhibitors can help in the preparation of this evaluation, which can be accessed by participants later than the FMat.

To do so, other studies need to be done to assess whether the dialog would be relevant. Even because, on the occasion of the 3<sup>rd</sup> Seminar, at the round table, the components diverged about the idea of the evaluator reporting his suggestions to the exhibitors during the exhibition. In the end, it was decided only by the communication of them to the work advisor, and the evaluator should not interfere with direct suggestions to the exhibitors. Although this deliberation is more effective, we understand that the results of this research show the potentiality of the dialog between evaluator and exhibitors, provided that the evaluator subject has the characteristics previously listed.

We must also point out difficulties or obstacles which may prevent this formative action from being carried out, namely: (i) the time, because the performance of the entire action will take time, preventing the evaluators from

viewing other works or meeting another demand on the day of the exhibition; (ii) availability of committed evaluators/coordinators and condoning this dialogical posture; (iii) absence of openness that those involved may have with the action; (iv) evaluation dynamics, which requires work and material before the fair; (v) evaluators heterogeneity in terms of evaluation design; (iv) evaluation design for comparison between studies aiming only classification by virtue of a standard of excellence.

As already mentioned, this study was based on an evaluative action developed by one of the authors, in an action-reflection movement. As a perspective of continuity, we aim for a return to action, discouraging itself in the framework of a Regional Fair as all the works to, in a new reflection, generate different understandings based on the perceptions of the evaluators, exhibitors and job advisors. Another perspective may include an investigation into the contributions that were made to the works that did not follow for another stage, but participated in a dialogical evaluative action.

Finally, we highlight that “[...] if the reflexive capacity is innate in the human being, it needs contexts that favor its development, contexts of freedom and responsibility” (ALARCÃO, 2003 p. 48). Therefore, it is understood that the evaluation action during the FMat cannot be summarized in a context in which exhibitors only present what they did and the evaluators make records in the synthesis report. There needs to be dialog with one another, a dialog that not only describes what has been done, what can be done and what needs to be done, but a dialog that reaches an explanatory and critical level, situated in the region of the limits of the act developed in relation to the potentialities of the act of developing further.

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