Research and authorship: experiences in remote education

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Abstract
In the educational context, the pandemic caused many transformations, mainly in the ways of teaching and learning; obtained the suspension of face-to-face classes and the adoption of remote classes to continue the school year. In this article, we present pedagogical experiences carried out during remote classes of the Research and Authorship curriculum component, in state schools in MS through APCs. The activities aim to verify what is the researcher idea that the students of the Elementary School Final Years have in their imagination, in order to support the future planning of the curricular component and outline objectives that enhance student leadership. From the activities, we found that many students do not see themselves as research, and that this professional is seen by them as something far from reality, this reflects on new actions in order to deconstruct this idea and awaken the sense of the student-researcher in space school.
Keywords: Pandemic. Remote teaching. Student-Researcher.

Pesquisa e autoria: experiências no ensino remoto

Resumo
No contexto educativo, a pandemia provocou muitas transformações, principalmente nas formas de ensinar e de aprender; tivemos a suspensão das aulas presenciais e a adoção das aulas remotas para dar continuidade ao ano letivo. Neste artigo, apresentamos experiências pedagógicas realizadas durante as aulas remotas do componente curricular Pesquisa e Autoria, em escolas estaduais do MS por meio das APCs. As atividades tiveram como objetivo, verificar qual é a ideia de pesquisador que os educandos do Ensino Fundamental Anos Finais têm em seu imaginário, com o intuito de embasar os planejamentos futuros do componente curricular e traçar objetivos que potencializem o protagonismo estudantil. A partir das atividades, constatamos

que muitos estudantes não se enxergam enquanto pesquisadores, e que esse profissional é visto por eles com algo distante da sua realidade, isto permitiu refletir sobre novas ações em busca de desconstruir esse ideário e despertar o senso do aluno-pesquisador no espaço escolar.

Palavras-chave: Pandemia. Ensino remoto. Aluno-Pesquisador.

1 Introduction

The Covid-19 pandemic that has been ravaging the world since December 2019 has caused the various stages of education, from early childhood education to higher education, to make adaptations to a new reality, with totally distance learning activities, remote teaching has become part of the routine of thousands of students and educators.

In the state school system of Mato Grosso do Sul, it was through digital resources that the greatest contact between the pedagogical team, the students and their families was achieved, through the binding remote classes that were implemented with the suspension of the classroom classes.

Considering this context, the present text presents the pedagogical experiences developed by the authors in their teaching activities with students of the Elementary School Final Years of the Padre José Daniel State School located in the city of Vicentina-MS and of the Vicente Pallotti State School in the city of Fatima do Sul-MS, both schools belonging to the Basic Education State Network of the state of Mato Grosso do Sul, through the remote classes of the curricular component of Research and Authorship.

Seeking to develop mainly the students' creativity skills and to keep them motivated through the remote classes, we planned as one of the Complementary Pedagogical Activities (PPAs), to verify what is the idea of researcher that the students have in their imagination, and if they see themselves as a researcher or if they can become one someday.

We believe that knowing what is the vision of the researcher present in the students' imagination, we will be able to base future planning of the curricular component and trace objectives that enhance the development of skills needed for the curricular
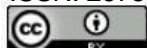
component in question, promoting the stimulus of research, the protagonism and the incentive for students to carry out investigative activities, and be researchers with active action in the process of building their learning.

2 Methodology

In the pandemic scenario, the educational community started to deal with a new reality, emerging the need for reinvention of education and schools, educators started to rely even more on the various technological resources and the adoption of new strategies to maintain the development of teaching and contact with their students. This scenario of many uncertainties brought many challenges for educators, leading them to rethink their pedagogical practices, which at this moment have gone from the presential to the remote form, something totally new within the reality of basic education in the state network in Brazil in general and in particular in the state of Mato Grosso do Sul (MS).

Thus, as a way to prevent the spread of the Coronavirus infection, the State Department of Education (SED-MS) suspended classes in all schools in the State Education Network as of March 23rd, 2020, and implemented the Binding Remote Classes, which allowed for the continuity of teaching without losing the school year. SED-MS started to guide the school units to use several technological tools and digital resources to conduct the educational processes and signed partnerships with Google Incorporation to encourage the use of tools such as Google Classroom.

To comply with the annual workload and school days, the schools in the State Education Network started to offer Complementary Pedagogical Activities (APCs) during the period when classes were suspended, where the mode of communication could be physical or virtual, depending on the student's access conditions, That is, those students who had access to receive the APCs remotely would receive them through virtual communication channels, while those who did not have this access would receive the APCs in printed form by going to the school unit to withdraw them with the pedagogical coordination (SED/MS, 2020).

In this context, it was necessary for the whole school community and the pedagogical team to rethink the pedagogical practices and the teaching strategies to be adopted in order to continue to promote a formative process for their students capable of leading them to build their knowledge and ensure contact with students through remote classes, which occurred through online channels such as Google Classroom and WhatsApp (calls, audios, and messages) and the service to students who do not have access to these digital resources was performed through printed activities.

Given this context, it was necessary to rethink and reflect on the teaching strategies to be developed in the various areas of knowledge, but that, specifically in the curricular component Research and Authorship, presented an extra differential, because it was the first contact with this curricular component, in other words, the 2020 school year was the first year that both students and teachers were beginning to discover the knowledge and skills to be developed and built throughout the study of this component in the State Education Network of the state of Mato Grosso do Sul.

Research and Authorship is a new curricular component within the curriculum matrix of the State Education Network of the state of MS and was implemented along with the new Mato Grosso do Sul Elementary School Reference Curriculum, introduced as of this 2020 school year (SED/MS, 2019). Being a new component, it also presents itself as a challenge for teachers, leading us to think about how to stimulate students to awaken their sense of researcher, their creativity, and their curiosity about the most diverse themes.

This fact led educators to reflect on how the remote study through the PCAs could contribute to achieve the goals of the curricular component, in a way that would motivate students to have authorship and protagonism in this process, through the creation of something new and their own, and, at the same time, encouraging them to awaken their sense of researcher in the school phase.

According to the Resolution/SED N. 3.671 (SED/MS, 2019) the curricular component of Research and Authorship aims to promote student autonomy, active participation and protagonism in the teaching process, through innovative pedagogical

practices, creation and construction of new knowledge, aiming at the integral development of the student.

Thus, seeking to understand the image of the researcher that the students of the Elementary School Final Years carried in their imagination, we applied in the 2nd Bimester of the school year of 2020, as PCA through remote classes, activities that stimulated students to think about who is a researcher. This PCA contained a supporting text that related the concepts of science, research, and researcher, so that the students could understand the context they were studying and reflect on the proposed theme; this PCA was applied to a total of eighty students.

The students were instructed to read the text, and then, as a practical activity, they had to prepare an illustration that characterized a researcher in their view; they also had to describe in their own words a summary answering the following questions Who is a researcher? What does he/she do? Do you consider yourself a researcher or could you someday become one? Name one researcher you admire? Are there researchers in your school? If yes, who are they?

Through these guiding questions and the unfolding of the activities, we believe that we could get to know the vision of researcher that the students carried in their imaginations, thus contributing to trace new actions and objectives for the planning of the curricular component, as well as to seek the development of the researcher student in the school environment.

3 Results and Discussion

After the deadline for students to return the PCAs, in both schools, we obtained as a result of the activities many drawings prepared by the students and several definitions about who is or may be this individual in question, the researcher in the students' imaginations.

For the purpose of analysis, we classified the activities developed by the students into two groups, called Group 1 and Group 2. In Group 1 were the students who
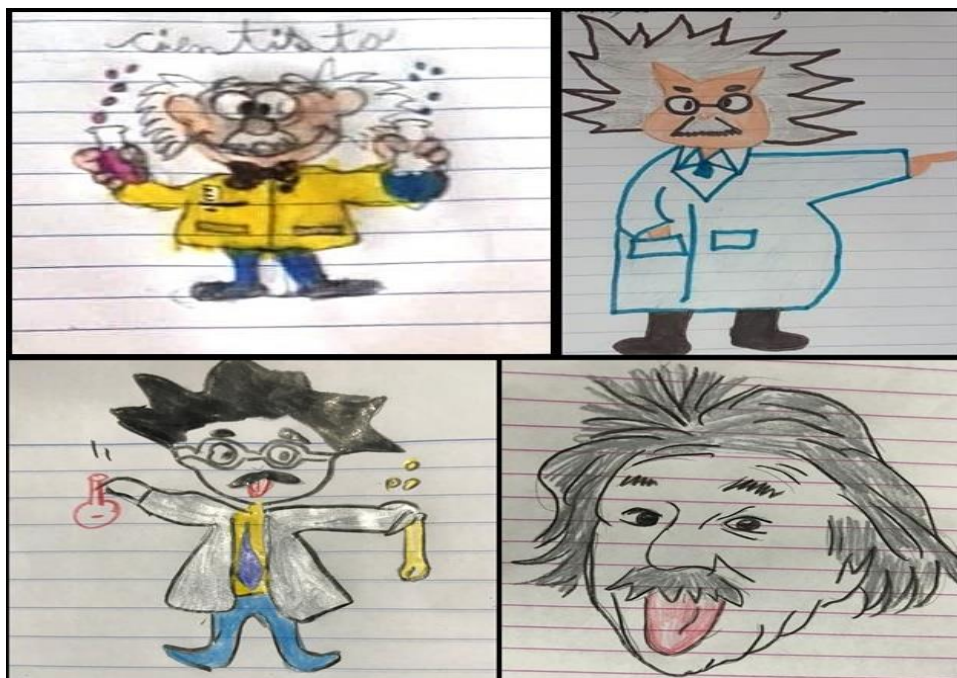
illustrated the researcher with that typical drawing of Albert Einstein, as can be seen in Figure 1. This group was the one that included the largest amount of activities prepared by students in both schools, totaling sixty activities.

Figure 1: The image of the researcher drawn by some of the students in Group 1

Source: Own authorship, 2020.

Regarding the questions that should be answered by the students, most students in Group 1 described that the researcher is a scientist, that individual who is inside laboratories and performs scientific experiments, many also reported that after studying for a long time, they could be transformed into a researcher.

Group 2, on the other hand, included the rest of the students, in a smaller amount than Group 1, adding up to the remaining 20 activities. We can observe some of the illustrations of this group in Figure 2.

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Figure 2: The image of the researcher drawn by some of the students in Group 2

Source: Own authorship, 2020.

The students of Group 2, have in their imagination the researcher as an individual who conducts research, they did not represent the figure of this researcher from the image of Albert Einstein as we observed in the figures of Group 1. However, it was also clear in the illustrations of the students from Group 2 that the study and work environment of the researcher is the laboratory, as can be seen in Figure 2.

Although there was a greater diversification in relation to the representation of the individual as a researcher, compared to the illustrations of Group 1, it was possible to observe that the students of Group 2 also continued to represent items present in the

laboratory environment, as being working instruments proper of researchers, such as the bezel, lab coat, beaker, and others.

Regarding the questions that the students had to answer, most students in Group 2 reported that a researcher is an individual who studies or works doing research, seeking to solve some problem. In this group of students, some even mentioned that researchers are very important to society because they are the ones who are conducting studies in an attempt to find a vaccine for the Coronavirus.

When asked who are the researchers they admire, most students in both groups mentioned names of famous scientists, such as Albert Einstein himself, who was represented in the pictures of Group 1, and others still mentioned Charles Darwin and Isaac Newton, which are more common names to be found in the textbooks used in schools.

Regarding the question about whether there were researchers in the school or not, most students in both groups answered no, because it was in universities and scientific laboratories that researchers worked.

It is worth mentioning that through the feedback from the PCAs, we found that the students from Group 1 demonstrated the typical conception of Albert Einstein to illustrate the researcher as a scientist, because it is the imaginary that they have built, mostly through social media, in a simple search on Google, this is the image that appears when we look for a drawing about researcher. Group 2, on the other hand, although they did not represent this typical drawing, they did not escape much from this representation, because, for the most part, the group presented the researcher as an individual who is in a laboratory developing experiments, as if it was only in these spaces that there were researchers.

From the analysis of the activities developed by the students, it was clear the vision they have about who is a researcher, characterizing him as an individual who is in a laboratory and develops scientific experiments, showing that students see the researcher as something very distant from their reality, they don't see themselves as researchers.

In this context, we realize the importance of the curricular component Research and Authorship in basic education, being primordial to provide students with the understanding that they can be a researcher, and that research can be developed on various topics and in different environments, such as at school, and not only in scientific laboratories, awakening the sense of the student-researcher in school and motivating students to have an active participation in the construction of their learning.

For the authors Ferreira et al. (2018) seeking to develop student protagonism, the teacher becomes a mediator of his students' learning, and it is pertinent that he offers "triggering situations, moments of argumentation and critical debates in the various areas of knowledge that stimulate the student in the search for answers to the problematization, the clashes of society in the technical, ethical, economic and environmental fields" (FERREIRA et al., 2018, p. 29), providing educational moments that instigate the curiosity of students.

In this way, the curricular component Research and Authorship should be worked in a way that awakens students' interest, encourages the search for answers, and stimulates research, allowing students to learn how to collect data and information and systematize them to build their knowledge in an active and autonomous way, and seeking to solve problems that arise in their daily lives inside and outside the school walls, and thus contributing to "train researchers, thinkers, autonomous and responsible, this is the target of contemporary education and its urgency" (MOSÉ, 2013, p. 65).

4 Final considerations

The curricular component of Research and Authorship should provide opportunities for student learning through the stimulation of creativity and enhance what its name already says, research and authorship of students, and in this process, the educator becomes the mediator of learning, establishing the link between his student and knowledge through new ways and educational practices that encourage the active participation of students in building their knowledge.

Considering the pandemic and the remote teaching context, the teaching practices needed to be reviewed and rethought, seeking to develop actions and activities that would encourage students to continue their studies remotely. Thus, through the activities developed, we noticed that the students felt motivated to reflect and demonstrate the researcher image that they carry in their imagination, providing the creation of connection paths between school learning and the students' previous knowledge during this period of social isolation, contributing to avoid the students' distancing from the teaching process.

In this sense, we emphasize in agreement with Ferreira et al. (2018) that it is the school's role to promote an environment in which the student develops skills aimed at critical and reflective thinking, and that these processes can be enriched through the adoption of pedagogical practices allied to the use of digital resources, and that take into account the students' reality and their daily experiences in the construction of their knowledge. In this way, educators can contribute to the development of potentialities in the teaching/learning process of their students and promote an environment of reflection, search for answers, discoveries, questioning, and student authorship.

The feedback from the PCAs allowed the teachers to elaborate their future planning with the purpose of deconstructing the researcher ideal present in the imagination of many students, which was based mainly on the idea of the researcher being only the person who works in laboratories, and as something very distant from their reality. In this context, the next PCAs were elaborated aiming to encourage, sharpen and arouse the students' curiosity, stimulating the development of research skills, creativity and curiosity, seeking to contribute to the development of the student-researcher, who seeks information, formulates hypotheses and tries to solve problems that arise in their daily lives with protagonism and authorship, whether inside or outside the school walls.

Thus, through the experiences developed, we understand the need to adopt teaching practices that awaken in students their sense of research and allow them to understand that they can be a student-researcher, building something within the curricular component of Research and Authorship that makes sense to them. Thus, by

stimulating the development of research skills, creativity and curiosity, the teacher contributes to the construction of a learning process where the student is autonomous and active.

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References

FERREIRA, A. C. de O.; ÁVALOS, C. M. V.; COSTA, C. Y. K. da. Educação científica: ressignificação do pensamento crítico. In: MS/SED. DAHER, A.F. B.; ANDRADE, E.M.; DAMACENO, E. P. (Orgs.). **Pesquisa e autoria nas vozes dos professores do MS.** Campo Grande, MS, 2018, p. 28-39.

MATO GROSSO DO SUL - SECRETARIA DE ESTADO DE EDUCAÇÃO (SED/MS). **Resolução/SED nº 3.659, de 27 de dezembro de 2019.** Disponível em: https://www.cre4coxim.sed.ms.gov.br/resolucoes-sed/. Acesso: 01 mar. 2020.

MATO GROSSO DO SUL - SECRETARIA DE ESTADO DE EDUCAÇÃO (SED/MS). **Resolução/SED nº 3.671, de 30 de dezembro de 2019.** Disponível em: https://www.cre4coxim.sed.ms.gov.br/resolucoes-sed/. Acesso: 01 mar. 2020.

MOSÉ, V. **A escola e os desafios contemporâneos**. 2. ed. Rio de Janeiro: Civilização Brasileira, 2013. 336p.

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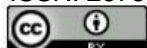Doutoranda pelo Programa de Pós-Graduação em Geografia da Universidade Federal da Grande Dourados. Professora da Rede Estadual e Particular de Educação do Estado de Mato Grosso do Sul. Contribuição de autoria: Contribuição teórica e participação ativa nas experiências pedagógicas abordadas no texto.
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