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**ESTÁGIO SUPERVISIONADO NO ENSINO DE QUÍMICA: ATIVIDADE
EXPERIMENTAL NA REDE PÚBLICA ESTADUAL NO MUNICÍPIO DE PIUM - TO**

**PASANTÍA SUPERVISADA EN DOCENCIA DE QUÍMICA: ACTIVIDAD
EXPERIMENTAL EN LA RED PÚBLICA ESTATAL EN EL MUNICIPIO DE PIUM - TO**

**SUPERVISED INTERNSHIP IN CHEMISTRY TEACHING: EXPERIMENTAL
ACTIVITY IN THE STATE PUBLIC NETWORK IN THE MUNICIPALITY OF
PIUM - TO**

Presentation: Poster

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INTRODUCTION

The Supervised Curricular Internship (ECS) is a discipline that aims to prepare the student for their future work in the teaching field, positively interfering in teaching-learning, promoting the overcoming of difficulties in social interaction, shyness, difficulty in reconciling theory and practice, lack of creativity, lack of pedagogical autonomy and experimental classes in formal and non-formal spaces. According to Masseto (1992), teaching should be directly related to the students' daily lives, through classes that they experience and stimulating discussions, research and students' studies. Experimentation, as a pedagogical function, in the teaching and learning process helps the student to understand chemical phenomena and concepts. Chemistry teaching practices in some public schools are scarce or non-existent due to the lack of formal spaces, equipment and specific reagents to carry out experimental activities.

Therefore, to meet these learning needs in chemistry teaching, during the ECS, an experiment with an acid-base indicator was carried out using low-cost material and the student's daily life with the duration of 1 (one) hour/class as an alternative methodology for understanding the content on inorganic functions.

THEORETICAL FOUNDATION

The supervised Curricular Internship is essential in the preparation of Chemistry Degree

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students, as it promotes situations for the application of academic knowledge in conditions of educational practice, enabling the intern to practice the development of skills and critical vision during the internship (Araújo; Martins, 2020). The future teacher will get to know the day-to-day running of the school administration, the classrooms, talk to students and interact with teachers and gain knowledge about teaching practice (Rocha; Silva, 2020). In the classroom, the future teacher must provoke questions about their pedagogical conduct, to enable the understanding of the causative circumstances that interfere in the educational action of the students involved. (Barreiro; Gebran, 2006).

The search for new teaching methods that meet and satisfy the learning of the Chemistry subject is a frequent requirement of students in the classroom, experimentation has proven to be a relevant methodology to satisfy these demands (Barreiro; Gebran, 2006). Experimentation is a methodological resource that can be used in teaching Chemistry, as it attracts and captivates students by demonstrating the content taught and solving problem situations in the classroom, providing more activity and attractiveness (Guimarães, 2009),

Specifically in the context of Chemistry teaching (Alves, 2007), experimentation contributes to the understanding of chemical concepts, separating practice and theory. According to the author, linking theory with practice requires generating situations that promote contextualization based on real situations and research to find solutions to problems. According to Salesse (2012), experimentation, a pedagogical function, in the teaching and learning process helps the student to understand chemical phenomena and concepts without there being a division between theory and practice.

METHODOLOGY

The Supervised Curricular Internship III was carried out in the 1st semester of 2023, at the State High School Unit, belonging to the public network of the State of Tocantins, located Municipality of Pium, in a class of 40 students from the 11th grade of high school carried out as an intern in the 7th period of the Chemistry Degree course at the Federal Institute of Education, Sciences and Technology of Tocantins – IFTO, Paraíso do Tocantins campus and supervised by the professor of the Teaching Unit.

On 03/09/2023, students watched a 50-minute regency given by the intern on Inorganic Functions (acids, bases and salts) and their relationship with everyday life. The 11th grade students



showed interest in the topic, asked questions and answered objective printed activities about the content taught by the intern. On 03/23/2023, an experiment on acid-base indicator related to inorganic acid and base functions was applied. The experiment was carried out following an experimental script prepared by the intern and approved by the supervisor. During practice, students identified acidic and basic substances with the presence of natural substances extracted from red cabbage. The identifications were made by the students, by changing the color of acidic and basic substances in containers containing bleach, washing powder, milk of magnesia, sodium bicarbonate, milk, detergent, vinegar and lemon soda and adding cabbage juice. Purple (figure 1).

Figure 1. Experimental class carried out with 11th grade students.



Source: Authors (2023)

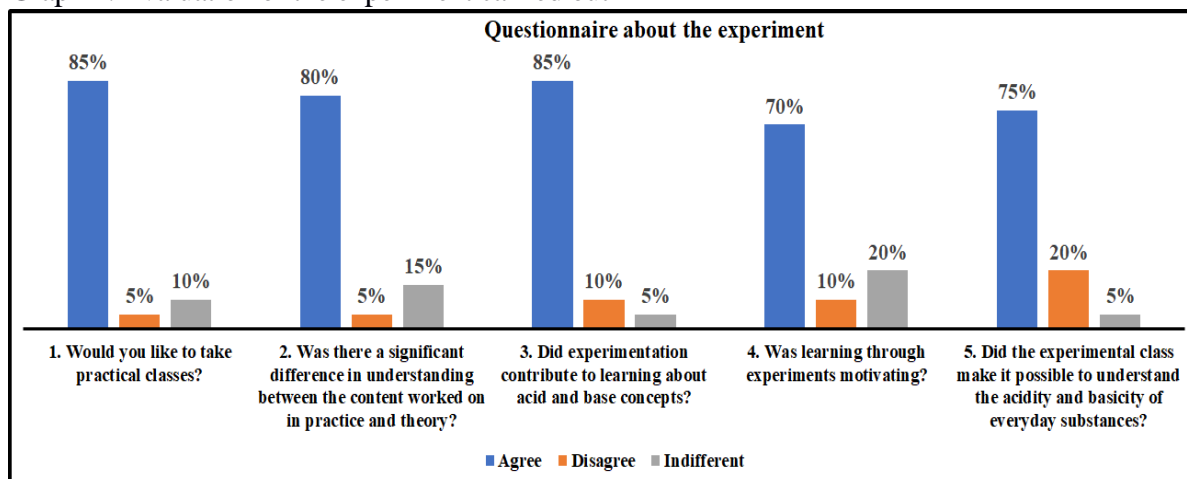
After the practice, the students were asked questions about the basic concepts of acids and bases, where it was possible to observe a difference between the theoretical and the practical class, as there was a broader understanding in the students' oral responses. Students answered a questionnaire with the following closed questions 1. Would you like to take practical classes? 2. Was there a significant difference in understanding between the content worked on in practice and theory? 3. Did experimentation contribute to learning about acid and base concepts? 4. Was learning through experiments motivating? 5. Did the experimental class make it possible to understand the acidity and basicity of everyday substances?



RESULTS AND DISCUSSION

Through the analysis of the application of the questionnaire (graph 1), it is observed that the experiment carried out presented a percentage greater than 70% in all evaluated items, showing a good evaluation by 11th grade students.

Graph 1: Evaluation of the experiment carried out



Source: Authors (2023)

According to the results presented in graph 1, we observed that 85% would like to have more practical classes. According to Cruz (2007), schools need to provide and provide adequate spaces for the laboratory that comply with pedagogical guidelines, so that teaching can improve. According to Oliveira et al., (2019), the great lack of interest among students in the study of chemistry is, in general, due to the lack of experimental activities that can relate theory and practice.

Regarding the significant difference in understanding between the content worked in practice and the theory taught in the classroom, 80% agreed that there was a significant difference. Santana et al., (2019), state that experimental classes enable students to appropriate scientific concepts through investigation, seeking to understand the transformations that occur during experimentation.

When asked about the contribution of experimentation to learning the concepts of acids and bases, 85% stated that there was a clearer assimilation of the content taught in the classroom. In the teaching of Chemistry, this teaching-learning relationship with experimental classes is fundamental to achieving success in teaching this curricular component (Silva, Ferreira and Souza,2021).

The experimental class was motivating for 70% of the students interviewed, as it helped in the association of concepts, allowing a change of environment and the absence of the monotony



imposed by the classroom with a paintbrush and whiteboard. The importance of experimental classes awakens students' interest in science, helping them to develop ideas and understanding about different subjects, often present in their daily lives (Sousa; Valério, 2021, p. 2).

The experiment enhanced the understanding of the concepts of acidity and the basicity of everyday substances for 75% of those interviewed. Francisco Júnior et al. (2008) say that the experimental approach of an investigative nature aims to obtain information to support discussion, reflection, considerations and explanations, leading the student to understand concepts and different ways of thinking about the world through science. For Pereira, et. al., (2021), experimental classes stimulate students' attention, promote participation, dynamic classes and a significant increase in student learning, producing greater performance in assessments and tests.

CONCLUSIONS

The supervised curricular internship III provided the opportunity to teach and carry out experimental Chemistry classes in a public school. The experimental class achieved the desired objective by verifying the acidic and basic nature of substances in the student's daily life, indicating the inseparability of theory and practice, enabling students to have a experience to build your knowledge, establishing the importance of experimentation in the learning process. Therefore, it was possible to develop experimental classes with low-cost material in formal and non-formal spaces that contribute to a better understanding of inorganic functions.

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