

## EXPERIENCE REPORT – 1ST YEAR B CETI PROF JOSÉ AMAVEL THE USE OF DYNAMICS IN CHEMISTRY TEACHING

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**Abstract:** We reported at this moment the experience lived as a teacher at CETI Professor José Amável, located in Teresina-PI, within the scope of the Pedagogical Residency Program – Chemistry/UESPI/CAPES, developed through `Universidade Estadual Pedagógica do Piauí` - UESPI. The program aims to promote the improvement of the practical training of students on the Full Degree in Chemistry course through their immersion in the school education space. Diverse activities were carried out that stimulated the cognitive, emotional and social development of students. The partnership between Residents, Preceptors and other school professionals promoted an exchange of knowledge and experiences, leaving a legacy of learning and inspiration, contributing to the training of professionals committed to quality education, as the technique applied in the classroom proved to be very optimistic in teaching students' learning, both in groups and individually, where data analysis was carried out through a dynamic carried out in the classroom.

**Keywords:** Teaching Learning, Chemistry Teaching, Pedagogical Residency, Dynamic class

## INTRODUCTION

According to (DIONIZIO, 2019) where today, many of the educators in the field of Chemistry still adhere to conventional teaching methods, which result in an isolated and unlinked content approach, harming the student's ability to achieve meaningful learning. This, in turn, contributes to a misunderstanding of the role of Chemistry in everyday life.

Both in initial training and in ongoing training, teacher training must be built based on the multiple knowledge that will be applied during professional practice. This is crucial to ensure the effective development of skills and

competencies essential to the teaching career. (WESLEY; RAMOS, 2020).

The pedagogical residency is a program aimed at the initial training of future teachers, and is also considered as a stage of continued training (FREITAS; ALMEIDA, 2020).

Besides, according to (FREITAS; ALMEIDA, 2020), the initial preparation of future teachers and other professionals in the educational field requires mandatory incorporation of the curricular internship, which is presented as an essential experience for improving teaching practice. This stage provides the student with the opportunity to experience the application of pedagogical approaches throughout their educational path. Recognizing that the internship promotes the connection between theoretical concepts and the practical performance of these professionals, it is crucial that this process is meticulously planned, with clear goals derived from a curricular structure that facilitates the integration of pedagogical practice. During the period of residence, students seeking degrees actively participate in public Basic Education schools, known as "field schools".

They are constantly monitored and supervised by a Basic Education teacher, known as a "preceptor", and by a university teacher, called a "mentor teacher". In this context, the program facilitates communication and collaboration between three parties: undergraduate students, school teachers and university professors. Higher education institutions (HEIs) present projects structured into clusters that involve various degree courses.

These groups actively participate in planning, meetings and discussions that include, for example, monitoring and conducting teaching activities in school subjects, preparing them for their future role as teachers in the environment where they will work.

The Pedagogical Residency Program is an initiative that aims to strengthen initial teacher training through practical experience in basic education schools. Created with the aim of promoting integration between theory and practice, the program offers undergraduate students the opportunity to improve their knowledge, skills and pedagogical skills. (PAULA; SOARES, 2023).

The Pedagogical Residency is based on an innovative proposal, which seeks to break the dichotomy between higher education and basic education, bringing these two contexts closer together and promoting more contextualized and meaningful training. Through partnerships established between the university and public schools, residents have the chance to act as supporting actors in the teaching-learning process, under the supervision of experienced teachers.

During the program, residents have the opportunity to observe and actively participate in educational practices, contributing to the construction of knowledge, the development of students and their professional identity. Keeping up with the new demands of scientific education involves understanding how the relationships between Science, Technology, Society and the Environment are integrated into the teaching and learning processes. (FIGUEIREDO; MENDES, 2023).

## METHODOLOGY

The RP experience took place at the CETI Professor José Amável school, in the year 2023, the entire process took place in the morning shift in the 1st Year B (High School) class. Initially, the behavior of the students towards the new Student was observed, where it was possible to see that because they were new, everyone had a different curiosity.

The class was taught in one day in the standard format, teacher - student and board, to explain the subject, the following week a

dynamic quiz activity was developed on the subject taught in the last two classes, a 'quiz' with 16 questions, drawn on the spot using the cell phone application called "Random Number Generator" and with the help of "Datashow" so that there was monitoring with the students, the questions were directed to a group, with a "battler" if the group did not know the answer, it was passed on to the next group.

The room was divided into two groups, and the groups had very close scores, along with the dynamics, individual opinion and the group's choice of options were taken into consideration. This means that the student who gets the question right alone (an opinion different from that of his group) gets the point.

Where there was a very positive learning and interest from the students, with the help of Datashow so that both the dynamics and the subject could be visualized. In the 1st Year B of Escola CETI José Amável, a variety of activities were developed to stimulate the cognitive, emotional and social development of students. These activities were planned to provide meaningful and engaging learning, taking into consideration, the characteristics and needs of the class's age group.

Within the scope of cognitive development, students were exposed to different stimuli that helped them build knowledge and skills in the areas of Language, Mathematics, Science and other subjects. Appropriate teaching materials, educational games, playful activities and thematic projects were used to arouse students' interest and curiosity, promoting understanding and problem-solving ability.

With regard to emotional development, activities were carried out to strengthen students' self-esteem, self-knowledge and socio-emotional skills. Through cooperative games, group dynamics and moments of reflection, students are encouraged to express their emotions, develop empathy, deal with

conflicts and establish healthy relationships with colleagues.

## RESULTS AND DISCUSSION

The dynamics are distinguished by elements that define them: they are short-term actions that employ specific techniques, stimulating the motivation and engagement of participants.

The objectives of the dynamics cover a wide range, ranging from introductory activities that encourage an integrative approach and mutual approach between participants, to teaching specific skills (such as interpersonal relationships, customer service, sales techniques, etc.), and include moments of reflection and change of attitude. (SILVA, 2008).

Even before assessments or written exams, the teacher has the ability to determine whether the learning achieved is substantial. This is possible due to the active approach adopted during classes, based on the dynamic classes' method. During classes, student learning can be assessed in real time. This means that any deviation from the teacher's pedagogical objectives or any dissatisfaction on the part of students with their learning can be addressed before the written assessment is carried out. (PAULA; SOARES, 2023).

The first class covered the theoretical subject of Chemistry about Matter, properties of matter, with the help of Datashow, the following week, in the second class, in the first hour, a quick review of the subject covered was carried out, and then the application of the dynamic class, which consisted of the answer and justification for the chosen answer.

The application of the "Quiz" enabled a greater analysis of the absorption of knowledge by students, the same was carried out using "PowerPoint" and the mobile phone draw application called "Random Number Generator" and the help of Datashow, for a

better dynamic in the room.

The method used was very positive and the use of Datashow facilitated the use of illustrative images that helped to establish the subject for the students. Individual opinion and the choice of options by groups were taken into consideration due to the justification given by each group or student with the choice of answer. And yet, it can be seen that group and individual responses were satisfactory, as illustrated in Table 1 below.

STUDENTS	SCORE / HITS
GROUP 1 (12 STUDENTS)	7 / HITS
GROUP 2 (12 STUDENTS)	6.5 HITS
STUDENTS WHO HIT BY THEMSELVES	9 STUDENTS (1 HIT EACH)

Table 1: Result of the quiz carried out in the classroom.

Source: Personal Repository (2023)

According to table 1, a marked participation and absorption of the content taught was quite positive, considering that both group participation and individual responses resulted in a significant score for the survey. During the game, the students demonstrated palpable enthusiasm, requiring restraint at certain times.

The competitive spirit prevailed among the teams, who expressed great excitement with each correct answer. Immediately after viewing the question, the teams quickly collaborated to provide an answer as quickly as possible. It is also worth noting that throughout the activity, students barely used their cell phones, which is a positive aspect if we consider the usual tendency of excessive use at inappropriate times during classes.

The high level of engagement was evident from the start of the competition until the winners were revealed, signaling that the gamification approach is indeed effective in increasing student engagement in the classroom. (DOS ANJOS et al., 2021).

There is a growing adoption of these

games as a pedagogical tool, since they have the ability to promote autonomy, encourage understanding and respect for rules, as well as improve the assimilation of content and instigate motivation for learning.

This way, the game becomes a tool with great impact, combining technology with curiosity and the pleasure of learning through fun. (INFORMATION, 2023). Active pedagogical strategies represent approaches employed by

the educator in response to class assessments and perceived limited student engagement with the material presented.

These approaches have the central objective of converting the student into an active and dynamic researcher. The teacher adopts these strategies to improve the teaching process, making it more relevant and engaging. (SILVA et al., 2023).

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