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RESEARCH ARTICLE

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THE PEDAGOGICAL RESIDENCE IN CHEMISTRY PROGRAM AND LEARNING DIFFICULTIES IN YOUTH AND ADULT EDUCATION

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ABSTRACT

Youth and adult education allows teachers to work more flexibly, who can innovate and try other strategies to motivate their students. The development of the student in an integral way starting from aspects of their experiences should be the constant objective of teaching chemistry, as they can understand the chemical processes, at the same time that they are led to reflect on major thematic issues related to social contexts, seeking to build a more just and egalitarian society, through the discussion of attitudes and values. This article aims to discuss the initial ideas of the graduate student in Chemistry about the Pedagogical Residency Program, one of the actions that are part of the National Teacher Education Policy, reporting the experiences lived in groups of the Youth and Adult Education modality. This research is characterized by being of a theoretical and empirical nature, whose methodological procedures were based on bibliographic and field research through the space provided in the Pedagogical Residency Program in chemistry classes. The informants of the present research are part of the elementary and high school institution, located in Brazil. The report consists of the presentation of experiences lived in the Pedagogical Residency Program of the Degree in Chemistry course, held in the first semester of 2019, in a state school of elementary and high school, in the night shift. The Pedagogical Residency Program contributes a lot to the knowledge about the area that we intend to work in, and through it to realize the learning difficulties of Youth and Adult Education students. Within this context, we recognize that Youth and Adult Education favors the social, economic and political inclusions of people who for multiple reasons did not have access to or did not complete elementary school or high school at the regular age. At the end of the analysis, it was possible to point out the learning difficulties in teaching Chemistry and also realize that the literature points to multiple factors for the causes of learning difficulties in youth and adult education.

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INTRODUCTION

The exposed theme talks about the learning difficulties in teaching Youth and Adult Education in the context of living in the pedagogical residency program. The research is based on documents, and authors who confirm the exposed subject. Through the experience in the Pedagogical Residency Program, it was possible to perceive the learning difficulties of students of Youth and Adult Education at the State School of Elementary and Secondary Education, and also to know how the teaching process takes place in this modality at that school (Costa and Santos, 2019; Dantas and Santos, 2019). According to the Law of Directives and Bases of Education in Brazil, Youth and Adult Education is a teaching modality that proposes to provide school education for those who have not had the opportunity to complete elementary or high school in appropriate ages. Although the political initiatives aimed at this modality are old, it was only in 1996

that approval was given to integrate Youth and Adult Education in Brazilian Education Guidelines Law (Santos, 2020). During the period that we are experiencing the Pedagogical Residency Program, it was possible to acquire knowledge about the process of acting in this modality (Youth and Adult Education), at the granting school. What we can say is that education in Youth and Adult Education needs to be managed with great care, teachers need to stimulate the student so that he can persevere when it comes to teaching (Santos, 2021). Teaching chemistry to high school students in the Youth and Adult Education modality is a challenge, since they claim difficulties in understanding chemical concepts and insecurity because they do not feel capable of learning chemistry (Santos et al., 2021). In order to overcome these difficulties from living in the classroom, there may be the possibility for the teacher, with an appropriate methodology, to develop a work of learning with the ability to relate the didactic content to the daily life of his students. In general, students have little time to study and many responsibilities, where most of them have

financial difficulties, family problems, age differences and differences in the level of knowledge and skills in Chemistry, they are people who were excluded from the program right to training (Santos et al., 2021; Araújo and Santos, 2020; Souza et al., 2015; Santos et al., 2016; Silva et al., 2020; Medeiros Filho et al., 2020). Their routine is tiring and the lack of motivation of these students is also related to the great feeling of guilt, shame for not having completed their studies at the right time. According to Peluso (2003), if we consider the psychological characteristics of adult learners, who bring a history of life usually marked by exclusion, we will see the need to know the reasons that, in a way, hinder their learning. This difficulty is not related to the adult's cognitive disability. On the contrary, the feeling of incapacity brought by the student is related to a cultural component that labels older people as unable to attend school and that blames the student for having evaded it. It is important and fundamental that activities are developed in order to awaken observation, stimulate and promote the knowledge of the Youth and Adult, integrating collective practices. This approach places the student as an axis in the learning process, providing meaningful answers. Based on these principles, it will be possible to verify the reasons that lead students to seek Youth and Adult Education, and to raise the difficulties presented in the teaching of chemistry. The teaching of Chemistry in High School for many researchers has been characterized, among other aspects, by being attached to empiricism, the mathematization of phenomena and the memorization of a language specific to this science (Santos and Santos, 2020). These elements are often found in the speech of teachers who work in regular education, but they also seem to populate the thinking of teachers who work in Youth and Adult Education, although this modality of basic education has specific legal and methodological guidelines, which are directed towards a differentiated pedagogical practice.

The Curricular Guidelines for high school in the area of Natural Sciences, Mathematics and their Technologies, show that, what is observed in the teaching of chemistry at the secondary level: In general, in school programs, the idea of a number that persists huge amount of content to develop, with unnecessary and anachronistic details. In this way, teachers are obliged to "run with the material", piling one item after another on the student's head, preventing him from participating in building a fruitful understanding of the natural world. The teaching of Chemistry in the curriculum practiced is visibly divergent and that which the community of researchers in Chemistry education in the country has been proposing (Santos et al., 2016; Silva et al., 2016; Martins et al., 2016). In no educational methodology can Chemistry be taught in a distant and abstract way. Therefore, the need for interaction between the chemical content and the social context, taking matters in a less abstract way to understand the issues within their reality (Santos and Araújo, 2018). This is one of the objectives of teaching Chemistry in Youth and Adult Education: the contextualization of the contents covered. One of the opportunities for Young People and Adults to improve their knowledge is the practice of activities that will stimulate the critical spirit, arousing their curiosity. Chemistry teaching must be within this parameter, providing classes where there is an interaction between students and the content. The Pedagogical Residency Program contributes a lot to the knowledge about the area we intend to work in, and through it to realize the learning difficulties of students of Youth and Adult Education. Through the observations made in the area of teaching Chemistry, with the participation of students and the teacher of Youth and Adult Education, it was possible to see the learning difficulties that greatly affect students in Youth and Adult Education, and thus understand the process in the teaching of Chemistry, and the role of the teacher. The period of observation and conducting in the Pedagogical Residency Program also opened windows for personal acquisition of learning, and through this program, gaining knowledge in the area of education. These are some of the goals that were achieved through living in the Pedagogical Residency Program. In order for this knowledge to be built, in addition to the experience in the Program, research was carried out on documents, and authors, such as Freire (1996), Santos and Silva (2019), Paiva (2005), among others, these are some that were cited as

foundations for that this academic work was elaborated. This work was organized in order to answer some doubts about the Pedagogical Residency Program in relation to school management. In order to understand the learning difficulties in teaching Youth and Adult Education, at the school granting the Program, an analysis was carried out based on the Youth and Adult Education room. In this way, it was possible to clarify the importance of teaching Chemistry at school and in the Youth and Adult Education modality. Such a study is justified by the importance of investigating ways of inserting Chemistry in the daily lives of students of this modality, since great difficulties are encountered, especially by teachers who face problems in the teaching process, becoming a great obstacle for these professionals the search for alternatives for the inclusion of these students in the school environment. In this conception, the investigation will be able to support the teacher, tracing strategies that favor the integration in the school and in Chemistry classes. In this article, we intend to discuss the learning difficulties of students of Youth and Adult Education at the José LuizNeto State Elementary and High School. Difficulties noted by the Pedagogical Residency Program, and through this discussion, improve knowledge and know how this teaching process works in the school institution. Through the Program it is also possible to observe the daily life of the granting school, and to observe the teacher of Youth and Adult Education, how he develops this teaching process in the school, and to analyze the way of acting with the students.

METHODOLOGY

During the observation and conducting period, attempts were made to develop methods of inserting the chemical content in a way that caught the attention of the students. We tried to use some different technologies in order to promote the involvement of students in the process of learning the concepts of Chemistry, as well as the development of skills and competences provided by the study. In the first stage of this research, a bibliographic review was carried out, and thus, it made possible conceptual foundations about the researched theme. The methodological procedures started from a qualitative approach when we realized that we deal with subjects, which for Peluzo (2010) there is a greater concern with the deepening and comprehensiveness of the understanding of human actions and relations. The second stage took place through observations of school practice and, as well as physical and administrative aspects, with the objective of acquiring information about the researched reality. Regarding fieldwork, observations and class participation were made in two classes: Cycle 5 and Cycle 6 of the Youth and Adult Education modality, by E. E. E. F. M. José LuizNeto.

RESULTS AND DISCUSSION

The observations made in the class made it possible to draw a profile of the class (Youth and Adult Education) and plan activities according to it. In the midst of our analysis in the observation and conducting period in the discipline of Chemistry, we observed the great need that students have in learning different contents using a different methodology (Matias et al., 2019). We realized how important it is to make the explanation of the contents as clear as possible, always trying to bring examples that involve the subject with the experience of each student. It was necessary to repeat contents and resume in each class what had already been worked on, so that they would be able to search their memory for what they had learned. And so, what we realize is that all of this work. It was possible to notice as the students' first reaction to the examples we presented during classes that they do not pay attention to what is written on the board or book and in the information that helps them. Some students said they agree that the information helps to capture their attention (Santos et al., 2017). In view of this observation, it was noticed when it is desired to pass on information to the student that is really useful for him in the course of the activity, somehow we must present examples that call attention and verify if he saw, interpreted and understood the information.

The biggest obstacle found in this practice was the systematization of the content, that is, the registration, for the first period of Youth and Adult Education there is always a need to assist and accompany them in each written activity. In the discipline of Chemistry, we observed that there was a great interest by the students in the topics addressed, at first they were a little shy, but during the class they gradually interacted, creating a rich and harmonious atmosphere in the teaching-learning aspect, reinforcing the proposals of Paulo Freire about teacher-student interaction. Our goal in class exceeded our expectations, since we realized that students were able to understand chemical processes that until then had no idea. Some students in the class was observed, reported the desire for learning, but who are unable to concentrate in class, due to the number of repeat students, in addition to adolescents with cognitive difficulties, elderly people who showed physical tiredness and among other peculiar aspects of students from Youth and Adult Education. Given this reality, we realize that the class is quite heterogeneous in terms of teaching and learning, with the minority of students who can already read and write and others who are still in the process of literacy. According to the teacher, most were literate (Silva and Santos, 2019). We tried to carry out a work that contemplated the reality of the students who are present in the classroom of the modality (Youth and Adult Education), and that, however, could help them in the literacy process. Based on this hypothesis, Santos (2010) states that literacy is not an isolated moment that occurs in a certain period of the student's school life, it is a process that happens before, during and after school life, and therefore, in addition to be present in the subject's life from an early age must remain in it for him to be successful in his learning in general. In this way, our duty as residents in the classroom is to contribute to the school, students and teachers with regard to teaching and learning. For conducting after the observation period, we rely on theorists who centralize their studies in constructivism as a teaching approach, a theory that is based on student autonomy, in the process of seeking knowledge, as well as in the use of new methodologies of teaching, thus aiming at literacy. Therefore, literacy is the action that allows and enables the subject to interact with reading and writing, unveiling a socially coded world and how to use it (Lazzarotto, 2010). Our search was to do a job that involved all students, as stated by Zaragoza (1999). We need to be in constant contact with each other. In this way, we try to keep the students as close as possible, so that we can carry out a satisfactory work, so that everyone has the opportunity to learn together.

CONCLUSION

During the course of the Pedagogical Residency program, we noticed that students demonstrate some difficulty in understanding the knowledge of the discipline, since most students do not trust their ability to learn. Therefore, the role of the teacher in this matter is fundamental, as it motivates the student and stimulated by the same, the students feel more secure of the contents taught, favoring their learning. Within this context, we recognize that Youth and Adult Education favors the social, economic and political inclusion of people who for multiple reasons did not have access to or did not complete elementary or high school at the regular age. We note the importance of the teacher in the student's learning, making Chemistry also perceived as something useful and meaningful, this occurs as the discipline is successfully worked in the classroom and contextualized, so that the students of Youth Education and Adults conclude their course with an excellent index of scientific and technological knowledge. The difficulties that arose during the realization of this period in the program were of paramount importance, from which we realized that it is through these difficulties that we can build our professional identity, since the moment we manage to get out of a problem situation, we believe in our ability to exercise our professional profession. We concluded that the Pedagogical Residency Program in the Youth and Adult Education modality that we dealt with in this work and that it occurred in two stages: first with the observation of the collaborative professor's pedagogical practice, and then with the practice in the classroom, it was an enriching and rewarding experience.

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